WE ARE 140 1879–2019

SARATOOLS.com
POWER TO PRODUCE
A BRAND OF SARTORIUS WERKZEUGE

YOUR TOOL CATALOGUE 2019/20

THE WAY YOU NEED IT.

THAT'S POWER TO PRODUCE

CLAMPING EQUIPMENT

Clamping equipment

Turning technology

	Centres	1047
	Live centres	1048
	Tailstock	1051
	Manual chucks	1052
	Manual collet chucks Captis M	1058
	Power chucks	1063
	Power-operated collet chucks	1067
	Dead-length collets	1068
	Clamping heads	1071
	Powered tools	1072
	High-speed spindle	1074
	Bar gripper	1076
	VDI tool holders	1077
	Hydraulic clamping system HYDRO-FIX	1081
	Quick-change tool holder	1086

Tool holders

INFO	Range overview Tool holders	1092
	Assembly aids	1095
	Stands for tool holders	1097
	Drill chucks	1098
	Drill chuck holders	1100
	Short drill chucks	1102
	Precision chucks	1105
	GER collets, 2 µm	1107
	Micro precision chucks AMC	1110
	Collet holders DC	1110
	Hydraulic expansion chucks	1112
	Hydraulic expansion chucks HG PENCIL	1114
	Tool holders with planar support	1118
	Collet chucks	1121
	Hydraulic expansion clamping unit ECOGRIP ER	1123
	ER collets 2 µm / 5 µm	1126
	Milling cutter holders DIN 6359	1133
	Shell-type milling cutter arbours	1135
	Tool holders for screw-in milling cutters	1143
	Extension for modular milling cutter heads	1145
	Shrink-fit technology	1146

Threads

Thread cutting machine 1156

Thread cutting quick-change chucks 1157

MT clamping sleeve for taps 1159

ER synchro insert STA 1160

Threading tap collet chucks 1162

Tool holder accessories

Boring bar blanks 1163

Pull studs 1164

Milling cutter retaining screws 1166

Cleaning propellers 1169

Vices

Precision vices 1171

Parallel vices 1172

Workpiece stops 1175

Clamping jaws with positioning pins 1176

Quick-change jaw system 1178

Parallel underlays sets 1180

Precision machine vices 1181

NC compact clamps 1183

NC high-pressure machine vice MH-S 1187

Centring vices 1192

5-axis clamp 1194

5-axis clamp set 1198

Multiple slide rail sets 120 mm 1202

Double clamping system DS 1204

Clamping devices

Vacuum clamping technology 1205

Slotted vacuum plates 1206

Zero-point clamping system 1208

Eccentric clamps 1213

Power clamps 1220

Clamps 1221

Screw jacks 1224

Hexagon nuts 1226

Screws for T-slots 1228

Precision T-nuts 1231

Clamping elements for welding tables 1236

Toggle clamps 1237

Magnetic clamping technology

Flat pot magnets with neoprene protective sheath 1241

Small magnets 1242

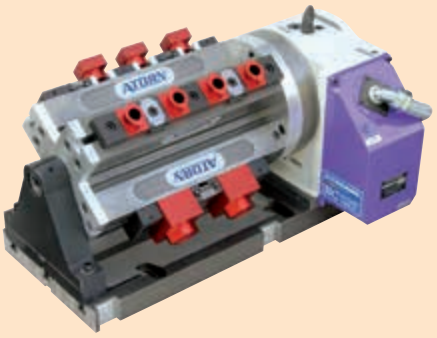
Permanent magnetic clamping plates 1246

Permanent lifting magnets 1248

Hoists

Lifting straps, sling rope, hook-end chain slings, lever hoists 1249

**Are you searching for solutions
that aren't covered by our catalogue?
We can provide you with suitable tools
for a huge range of tasks.
Contact us.
Our technicians will be glad to advise you.**



Round tables for an additional fourth and fifth axis

Chucks with box jaws

Tombstones with T-slot or hole matrix

Powered tools
for special applications

Standard and long-stroke hydraulic cylinder for CNC lathes

Clamping force measuring instruments for checking the pull-in forces of clamping systems in machining spindles

Hydraulic and pneumatic
Clamps for automation

ROHM Fixed centre (centring point)

DIN 806

- **Morse taper, DIN 228**
- 60° point angle
- Ground surfaces
- **Versions:**
  Full centre made from WS steel, fully ground
  Full centre with carbide insert
  Half centre made from WS steel, fully ground
  Half centre with carbide insert

Full centre

Shank	Ø mm	Length mm	D mm	Weight kg	WS steel art.no.	€	Carbide art.no.	€
MT 1	12.2	80	-	0.06	**401001** 0001	32,70		
MT 2	18	100	-	0.15	401001 0002	32,70		
MT 2	18	100	7	0.155			**401005** 0002	82,30
MT3	24.1	125	-	0.34	401001 0003	43,70		
MT3	24.1	125	11	0.36			401005 0003	110,–
MT 4	31.6	160	-	0.79	401001 0004	60,20		
MT 4	31.6	160	14	0.77			401005 0004	153,–
MT 5	44.7	200	-	1.92	401001 0005	110,–		
MT 5	44.7	200	18	1.95			401005 0005	275,–
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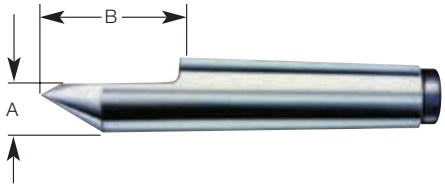

Half centre

Shank	Ø mm	Length mm	A mm	B mm	WS steel art.no.	€	Carbide art.no.	€
MT 2	18	100	11	30	**401010** 0002	49,10	**401015** 0002	123,–
MT3	24.1	125	15	38	401010 0003	65,80	401015 0003	164,–
MT 4	31.6	160	21	50	401010 0004	91,20	401015 0004	231,–
MT 5	44.7	200	29.4	63	401010 0005	164,–	401015 0005	415,–
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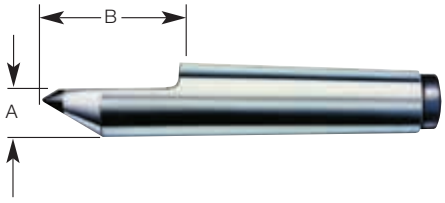

ROHM Live centre

- **With replaceable inserts**

Live centre

- For replaceable inserts (supplied without inserts)

Shank	Total length mm	A mm	D mm	E mm	Workpiece weight max. kg	True running accuracy mm	art.no.	€
MT 2	109	45	20	4	40	0.01	**401550** 0020	211,–
MT3	128.5	48	22	4.5	130	0.01	401550 0030	220,–
MT3	135.5	55	25	5	150	0.01	401550 0031	257,–
MT 4	169.5	67	32	5	250	0.01	401550 0040	294,–
MT 5	214	85	40	6	650	0.01	401550 0050	426,–
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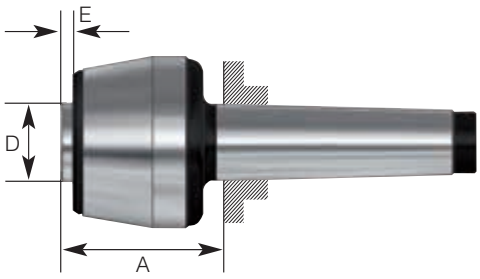

Replaceable inserts, 60°

suitable for centre punch tip	D mm	A mm	art.no.	€
401550 0020	16	20	**401551** 6020	27,10
401550 0030	20	24	401551 6030	32,70
401550 0031	24	27.5	401551 6031	38,20
401550 0040	28	31.5	401551 6040	43,70
401550 0050	38	43	401551 6050	54,70
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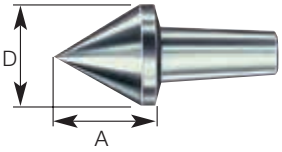

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Replaceable inserts, 90°

suitable for centre punch tip	D mm	A mm	art.no.	€
401550 0020	16	14.5	**401551** 9020	27,10
401550 0030	20	16.5	401551 9030	32,70
401550 0031	24	19	401551 9031	38,20
401550 0040	28	21.5	401551 9040	43,70
401550 0050	38	29	401551 9050	54,70

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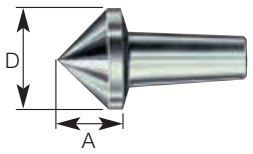


Set of 7 replaceable inserts in a wooden box

- **Contents**

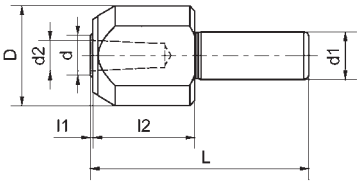
  1x centring point; 60°, 90° insert (1 of each); 2 x hollow 60° internal taper; 1x blunt 60° external taper; 1x 60°/30° insert

Shank	Workpiece weight max. kg	art.no.	€
MT 2	40	**401552** 0200	527,–
MT3	130	401552 0300	599,–
MT3	150	401552 0301	676,–
MT 4	250	401552 0400	791,–
MT 5	650	401552 0500	1.045,–

4187

Live lathe centres, spring-loaded

- **Replaceable centre inserts, straight shank**
- Spring-loaded version for axial longitudinal displacement when machining
- Fully hardened and ground
- Maintenance-free permanent lubrication
- Shaft sealing ring prevents the ingress of dirt and coolant



Spring stroke 2.4 mm

- Ejecting drift for replacing inserts
- Supplied without insert

Shank Ø mm	D mm	d mm	d1 mm	d2 mm	L mm	l1 mm	l2 mm	max. speed r/min	Workpiece weight max. kg	True running accuracy mm	art.no.	€
3/4"	40	18	19.05	12	90	4	38	4000	200	max. 0.01	**401525** 0001	265,–
19	40	18	19	12	90	4	38	4000	200	max. 0.01	401525 0002	265,–
20	40	18	20	12	90	4	38	4000	200	max. 0.01	401525 0003	265,–

4110

Spring stroke 3.0 mm

- Inserts are replaced by twisting in opposite directions using two open-end spanners on the flats of he axis and insert (AF size 17)

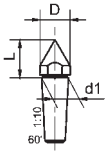
Shank Ø mm	D mm	d mm	d1 mm	d2 mm	L mm	l1 mm	l2 mm	Rotational speed max. r/min	Workpiece weight max. kg	True running accuracy mm	art.no.	€
1"	44	20	25.4	12	118	10	51	3000	300	max. 0.01	**401525** 0004	270,–
20	44	20	20	12	118	10	51	3000	300	max. 0.01	401525 0005	270,–
25	44	20	25	12	118	10	51	3000	300	max. 0.01	401525 0006	270,–

4110

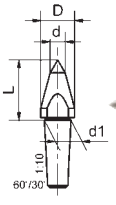
Replaceable inserts

Description	D mm	d mm	d1 mm	L mm	art.no.	€
Pointed centre	14	-	12	20	**401530** 1201	17,50
Copying centre	14	4	12	32	401530 1206	21,–

4110



401530 1201



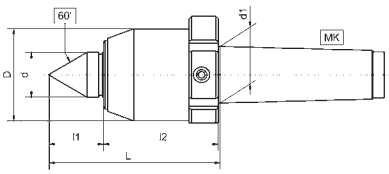
401530 1206

401530 1201

401530 1206

Live precision lathe centres

- High-performance design specially for CNC lathes
- Draw-off nut to compa y standards
- For high speeds and axial loads
- Excellent true-running accuracy thanks to the high-end bearing
- Fully hardened and ground
- Maintenance-free permanent lubrication
- Shaft sealing ring prevents the ingress of dirt and coolant
- With additional sealing, also suitable for grinding applications



Standard version

Shank	D mm	d mm	d1 mm	L mm	l1 mm	l2 mm	max. speed r/min	Workpiece weight max. kg	True running accuracy mm	art.no.	€
MT3	52	25	23.83	94	30	57	12000	300	max. 0.003	**401520** 0003	565,–
MT 4	60	28	31.27	106	35	63	10000	600	max. 0.003	401520 0004	585,–
MT 5	72	35	44.4	136	43	82	8000	1200	max. 0.003	401520 0005	745,–
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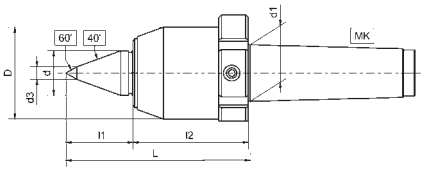

Slim version

Shank	D mm	d mm	d1 mm	L mm	l1 mm	l2 mm	d3 mm	max. speed r/min	Workpiece weight max. kg	True running accuracy mm	art.no.	€
MT3	52	25	23.83	104	40	56	8	12000	200	max. 0.003	**401521** 0003	585,–
MT 4	60	28	31.27	116	45	63	8	10000	300	max. 0.003	401521 0004	595,–
MT 5	72	35	44.4	146	53	82	10	8000	800	max. 0.003	401521 0005	815,–
											4110	

RÖHM Live centre

Slim version, 60° point angle

- Body hardened and ground
- Small head diameter prevents any impairment of supports, tool holders or lathe tools

Shank	Projecting length mm	Head Ø mm	Moving point Ø x length mm	True running accuracy mm	Workpiece weight max. kg	max. speed r/min	art.no.	€
MT 2	62	32	15 x 18	0.005	200	7000	**401501** 0002	170,–
MT3	62	34	15 x 18	0.005	400	7000	401501 0003	177,–
MT 4	75.5	42	20 x 25	0.005	800	6300	401501 0004	235,–
MT 5	106	58	30 x 34	0.01	1600	4300	401501 0005	340,–
MT 6	143	80	42 x 49	0.02	3500	3000	401501 0006	680,–
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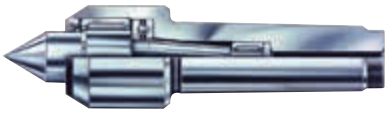

Slim version with extended running point, 60° point angle

- Body hardened and ground

Shank	Projecting length mm	Head Ø mm	Moving point Ø x length mm	True running accuracy mm	Workpiece weight max. kg	max. speed r/min	art.no.	€
MT 2	73	32	15 x 29	0.008	170	7000	**401505** 0002	204,–
MT3	74	34	15 x 30	0.008	340	7000	401505 0003	213,–
MT 4	88.5	42	20 x 38	0.008	700	6300	401505 0004	283,–
MT 5	119	58	30 x 49	0.01	1400	4300	401505 0005	408,–
MT 6	164	80	42 x 70	0.02	3000	3000	401505 0006	818,–
							4187	

Standard version, 60° point angle

Shank	Projecting length mm	Head Ø mm	Moving point Ø x length mm	True running accuracy mm	Workpiece weight max. kg	max. speed r/min	art.no.	€
MT 1	60.5	34.5	15 x 17	0.005	100	7000	**401510** 0001	211,–
MT 2	65	43	20 x 24	0.005	200	7000	401510 0002	211,–
MT3	79.5	58.5	25 x 31	0.005	500	5000	401510 0003	257,–
MT 4	102.5	68.5	32 x 41	0.005	800	3800	401510 0004	294,–
MT 5	129	88.5	40 x 50.5	0.005	2000	3000	401510 0005	426,–
MT 6	152	102.5	50 x 57.5	0.01	3500	2600	401510 0006	851,–
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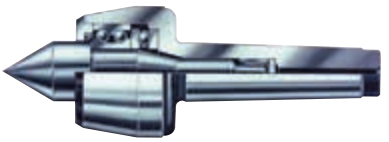


SARA® Live centres

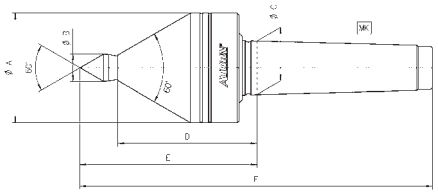
- Excellent true-running accuracy thanks to reliable precision bearings
- Special lubrication for long service life and low maintenance costs
- 60° point angle

Shank	Projecting length mm	Head Ø mm	Moving point Ø x length mm	True running accuracy mm	Workpiece weight max. kg	max. speed r/min	art.no.	€
MT 2	65	45	20 x 41	0.005	200	4900	**401516** 0002	82,–
MT3	79.5	60	25 x 48.5	0.005	500	3500	401516 0003	98,–
MT 4	102.5	70	32 x 61.5	0.005	800	2700	401516 0004	118,–
MT 5	129	90	40 x 78.5	0.005	2000	2100	401516 0005	199,–

4111

ATORN® Live centre, extended running point

- **60° point angle**
- **Extended running point**
- Perfect all-purpose point for universal use on manual lathes
- Radial run-out: max. 0.005 mm
- Fully hardened and ground tool
- Bearing arrangement for high axial forces
- Shaft sealing ring prevents the ingress of dirt and coolant



Shank	A mm	B mm	C mm	D mm	E mm	F mm	max. speed r/min	Workpiece weight max. kg	art.no.	€
MT 2	54	13	17.78	68.5	86.5	150.5	4200	170	**401503** 0002	285,–
MT3	54	13	23.83	68.5	86.5	167.5	4200	170	401503 0003	310,–
MT3	64	16	23.83	78	100	181	3800	330	401503 0013	335,–
MT 4	64	16	31.27	78	100	202.5	3800	330	401503 0004	360,–
MT 4	86	19	31.27	93.5	121.5	224	3200	550	401503 0014	435,–
MT 5	86	19	44.40	93.5	121.5	251	3200	550	401503 0005	485,–

4123

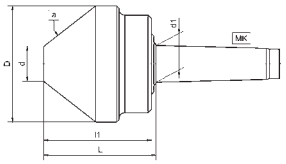
Easy to use for tubes with large diameters

The extended running point guarantees the required clearance angle for turning parts with small diameters.

Ideal for bar stock with large diameters

Live precision centring taper

- For machining tubes and hollow bodies with large bores and centres
- Fully hardened and ground
- Maintenance-free permanent lubrication
- Shaft sealing ring prevents the ingress of dirt and coolant



Shank	D mm	d mm	d1 mm	L mm	l1 mm	a mm	Rotational speed max. r/min	Workpiece weight D max. kg	Workpiece weight d max. kg	True running accuracy mm	art.no.	€
MT3	80	30	23.82	86	78	60°	3500	450	250	max. 0.005	**401531** 0003	207,–
MT 4	100	30	31.26	101	92	75°	3000	650	300	max. 0.005	401531 0004	280,–
MT 5	125	50	44.39	92	82	75°	3000	1800	1400	max. 0.007	401531 0005	345,–
MT 6	150	50	63.34	112	102	75°	2800	2800	2000	max. 0.01	401531 0006	470,–

4110

RÖHM Constant CoE front face driver

- **Front face driver for turning and milling work**
- For efficien y turning workpieces along their entire length with high accuracy and without reclamping
- Simultaneously allows slots or toothing to be milled
- Developed with a modular concept, making the driving discs and corresponding centring points universally replaceable
- One unit consists of a base body, a driving disc and an appropriate centring point
- Technical pressure compensation produces equal clamping force even with uneven workpiece faces
- Spring-mounted centring point acts as a workpiece length stop on the front face
- Workpiece weight max. 100 kg
- Clamping diameter Ø 8 - 80 mm

CoE complete set
Supplied with:
- 1x base body
- 3x centring point (centring Ø 6, 12, 16 mm)
- 4x driving disc (clamping Ø 12, 20, 32, 50 mm)
  Maximum turning Ø corresponds to double the clamping Ø
  E.g.: clamping Ø 32 mm, max. turning Ø 64 mm

Shank	art.no.	€
MT3	**402564** 0003	1.165,–
MT 4	402564 0004	1.195,–
MT 5	402564 0005	1.250,–
	4188	

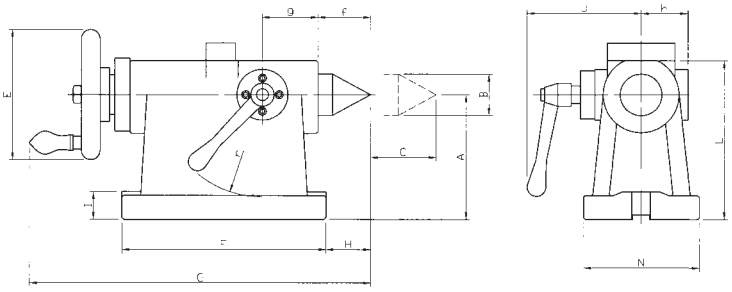
Carbide driving plates

L mm	H mm	Clockwise and anti-clockwise rotation art.no.	€
6	3.2	**401582** 0060	7,19
9.5	3.2	401582 0095	10,60
		4188	

Clockwise and anti-clockwise rotation

Tailstock for dividing attachments and rotary tables

- **With sleeve MT3**
- Ultra-precise design
- No height adjustment
- For mounting MT3 centring points (not supplied)



Tailstock with slot size 18 H7

A mm	B mm	C mm	E mm	F mm	G mm	H mm	I mm	J mm	N mm	f mm	g mm	h mm	r mm	Weight kg	art.no.	€
135	Ø14	55	125	215	332	25	25	109	120	40	69	44	80	21	**458053** 0135	670,–
160	Ø18	55	140	230	356	30	30	129	130	45	70	52	95	23	458053 0160	778,–
210	Ø18	55	140	230	356	30	30	129	146	45	70	52	95	29.4	458053 0210	830,–
															4166	

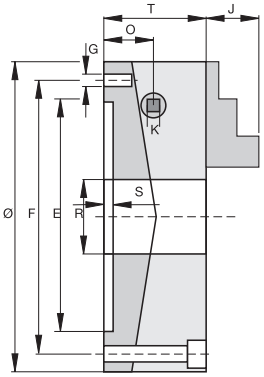
... from Ø 0.2 mm

ATORN®
High quality for great performance

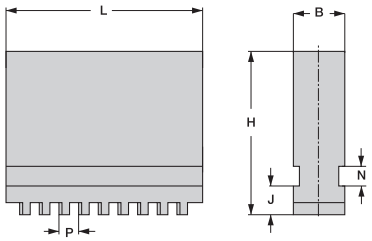
Universal lathe chuck

DIN 6350A

- **Made from cast iron**
- **CUSHMAN system, centric clamping**
- **With straight centre mount in accordance with DIN 6350**
- Made from fine-po ed special cast iron
- For external and internal workpiece clamping
- **Supplied with:**
  Chuck key and attachment screws
  One set of boring jaws (stepped outward)
  One set of turning jaws (stepped inward)
- Additional chuck sizes and chucks with integrated short tapers are available on request



Nominal Ø mm	F mm	E mm	R mm	T mm	J mm	G mm	O mm	S mm	K mm	Rotational speed max. r/min	True running accuracy mm	Three-jaw vers. art.no.	€	Four-jaw vers. art.no.	€
100	83	70 H7	20	52	17	3xM8	18	3	8	6300	0.04	**405001** 0100	330,–	**405003** 0100	350,–
125	108	95 H7	32	58	19	3xM8	22	4	8	5500	0.04	405001 0125	350,–	405003 0125	395,–
160	140	125 H7	42	62	23	3xM10	22	4	9	4500	0.04	405001 0160	395,–	405003 0160	445,–
200	176	160 H7	55	76	29	3xM10	27.5	4	11	4000	0.06	405001 0200	495,–	405003 0200	559,–
250	224	200 H7	76	82	33	3xM12	29.5	5	12	3500	0.06	405001 0250	699,–	405003 0250	769,–
315	286	260 H7	103	100	40	3xM16	35	5	14	2500	0.08	405001 0315	1.119,–	405003 0315	1.149,–
400	362	330 H7	136	110	50	3xM16	39	5	17	2000	0.08	405001 0400	1.769,–	405003 0400	1.989,–
												4113		4113	



Block jaws, type MC

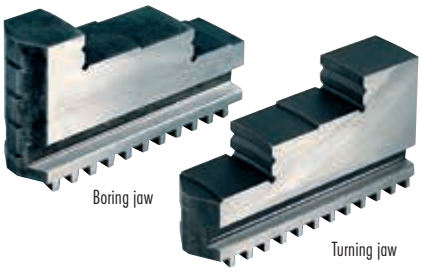
- **Sharpened, can be hardened**
- Prices per set

suitable for chuck size	L mm	B mm	H mm	J mm	N mm	P mm	Set of 3 jaws art.no.	€	Set of 4 jaws art.no.	€
100	43.2	14	34.9	5.9	7	6	**420126** 7100	53,–	**420127** 7100	72,–
125	53.2	16	36.9	5.9	7	6	420126 7125	64,50	420127 7125	86,–
160	67.9	18	43.1	7.4	7	6	420126 7160	70,50	420127 7160	94,–
200	75.9	22	55.1	9.9	8	8	420126 7200	134,–	420127 7200	179,–
250	99.4	25	59.1	9.9	8	8	420126 7250	175,–	420127 7250	235,–
315	124	32	72.4	11.9	12	10	420126 7315	179,–	420127 7315	240,–
400	153.5	32	87.4	14.9	12	12	420126 7400	220,–	420127 7400	295,–
							4113		4113	

Spare jaws for 3 and 4-jaw lathe chucks, ground

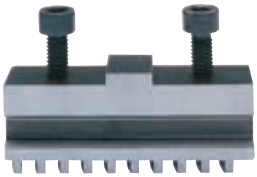
- Prices per set

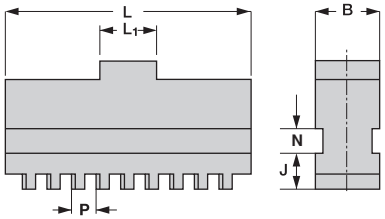
Nominal Ø mm	3 boring jaws art.no.	€	3 turning jaws art.no.	€	4 boring jaws art.no.	€	4 turning jaws art.no.	€
100	**420199** 1100	97,–	**420199** 2100	97,–	**420199** 4100	124,–	**420199** 5100	124,–
125	420199 1125	105,–	420199 2125	105,–	420199 4125	133,–	420199 5125	133,–
160	420199 1160	110,–	420199 2160	110,–	420199 4160	143,–	420199 5160	143,–
200	420199 1200	133,–	420199 2200	133,–	420199 4200	171,–	420199 5200	171,–
250	420199 1250	180,–	420199 2250	180,–	420199 4250	230,–	420199 5250	230,–
315	420199 1315	285,–	420199 2315	285,–	420199 4315	375,–	420199 5315	375,–
400	420199 1400	400,–	420199 2400	400,–	420199 4400	529,–	420199 5400	529,–
	4113		4113		4113		4113	



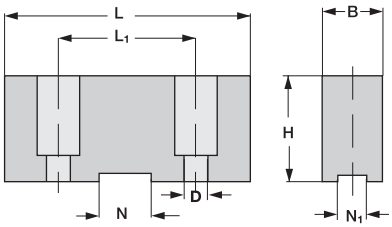
Base jaws, type GB

- With cross tenon
- **Hardened and ground**
- Supplied with fastening screws
- Prices per set





suitable for chuck size	L1 mm	P mm	N mm	J mm	B mm	L mm	Set of 3 jaws art.no.	€	Set of 4 jaws art.no.	€
100	10	6	7	5.9	14	43	**420120** 7100	67,–	**420121** 7100	89,50
125	12	6	7	5.9	16	52	420120 7125	78,–	420121 7125	104,–
160	12	6	7	7.4	18	64	420120 7160	88,50	420121 7160	118,–
200	14	8	8	9.9	22	77	420120 7200	81,–	420121 7200	109,–
250	14	8	8	9.9	25	101	420120 7250	121,–	420121 7250	162,–
315	20	10	12	11.9	32	125	420120 7315	200,–	420121 7315	270,–
400	20	12	12	14.9	32	150	420120 7400	215,–	420121 7400	290,–
							4113		4113	



Top jaws, type PW

- **Version with cross tenon**
- Material C15
- Prices per set

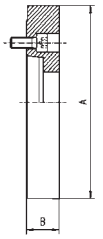
suitable for chuck size	N mm	L mm	L1 mm	D mm	B mm	N1 mm	H mm	Set of 3 jaws art.no.	€	Set of 4 jaws art.no.	€
100	10	50	20	5.3	20	14	20	**420160** 7100	46,30	**420161** 7100	62,–
125	12	65	28	5.3	20	16	25	420160 7125	47,90	420161 7125	64,–
160	12	75	38	6.4	23	18	36	420160 7160	47,90	420161 7160	64,–
200	14	95	48	10.5	28	22	40	420160 7200	73,50	420161 7200	98,–
250	14	120	55	10.5	32	25	40	420160 7250	83,–	420161 7250	110,–
315	20	140	60	13	42	32	52	420160 7315	125,–	420161 7315	166,–
400	20	165	70	13	42	32	70	420160 7400	157,–	420161 7400	210,–
								4113		4113	

Flange for lathe chucks and face plates

- **DIN 55026 with through-hole for direct connection to the spindle head**
- **DIN 55027 for bayonet-type disc fastening with stay bolts and collar nut**
- **DIN 55029 Camlock version with Camlock bolt**
- Steel design
- Machined on the machine side
- Faced on the chuck side
- Other taper and chuck sizes available on request

DIN 55026

- Short taper holder machined in accordance with DIN 55026 (A2)
- Faced on the chuck side
- Without attachment screws

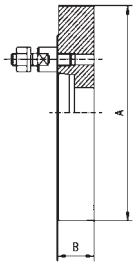


for chuck Ø mm	Taper size	A mm	B mm	Through-hole mm	art.no.	€
160	5	162	23	79.5	**405026** 1605	103,–
200	5	203	23	79.5	405026 2005	147,–
200	6	203	23	103	405026 2006	147,–
250	6	253	28	103	405026 2506	191,–
250	8	253	28	136.2	405026 2508	191,–
315	6	318	35	103	405026 3106	335,–
315	8	318	35	136.2	405026 3108	335,–
400	6	405	35	103	405026 4006	519,–
400	8	405	35	136.2	405026 4008	519,–

4174

DIN 55027

- Short taper holder machined in accordance with DIN 55026 (A2)
- Faced on the chuck side
- Includes stay bolt and collar nut

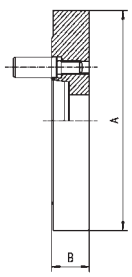


for chuck Ø mm	Taper size	A mm	B mm	Through-hole mm	art.no.	€
125	3	127	20	51.4	**405027** 1203	97,–
125	4	127	20	61	405027 1204	97,–
160	4	162	23	61	405027 1604	103,–
160	5	162	23	79.5	405027 1605	103,–
200	5	203	23	79.5	405027 2005	147,–
200	6	203	23	103	405027 2006	147,–
250	6	253	28	103	405027 2506	191,–
250	8	253	28	136.2	405027 2508	191,–
315	6	318	35	103	405027 3106	335,–
315	8	318	35	136.2	405027 3108	335,–
400	8	405	35	136.2	405027 4008	539,–
400	11	405	35	192.8	405027 4011	539,–

4174

DIN 55029 Camlock

- Short taper holder machined in accordance with DIN 55029 Camlock (A2)
- Faced on the chuck side
- Includes Camlock bolt



for chuck Ø mm	Taper size	A mm	B mm	Through-hole mm	art.no.	€
125	3	127	28	51.4	**405029** 1203	97,–
125	4	127	28	61	405029 1204	97,–
160	4	162	29	61	405029 1604	103,–
160	5	162	32	79.5	405029 1605	103,–
200	5	203	32	79.5	405029 2005	147,–
200	6	203	39	103	405029 2006	147,–
250	6	253	39	103	405029 2506	191,–
250	8	253	42	136.2	405029 2508	191,–
315	6	318	42	103	405029 3106	340,–
315	8	318	45	136.2	405029 3108	340,–
400	8	405	45	136.2	405029 4008	589,–
400	11	405	49	192.8	405029 4011	649,–

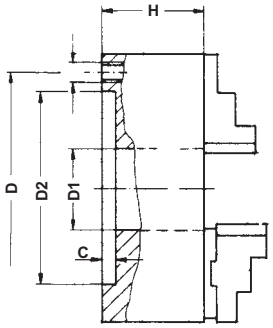
4174

RÖHM Universal lathe chuck ZS

- Die-forged steel body and spiral ring
- High clamping force
- Extra-low design for minimal protruding contours
- Chuck jaws ground-off or smooth running
- Balanced out and hardened
- **Supplied with socket spanner, drilling and turning jaws**
- **Additional versions available on request**

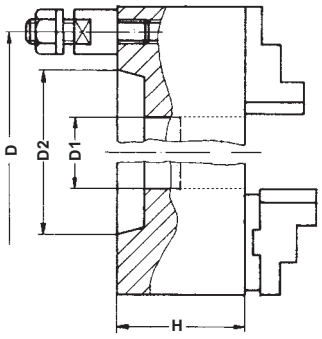
Lathe chuck with straight holding fixtu e in accordance with DIN 6350

Chuck Ø mm	D mm	D1 mm	D2 mm	H mm	C mm	G mm	Three-jaw chuck art.no.	€	Four-jaw chuck art.no.	€
80	67	19	56	39.5	3	3 x M6	**407102** 0080	368,–		
100	83	20	70	50	3	3 x M8	407102 0100	400,–	**409102** 0100	470,–
125	108	32	95	56	4	3 x M8	407102 0125	500,–	409102 0125	587,–
160	140	42	125	65	4	3 x M10	407102 0160	640,–	409102 0160	751,–
200	176	55	160	73.5	4	3 x M10	407102 0200	840,–	409102 0200	985,–
250	224	76	200	82	5	3 x M12	407102 0250	1.100,–	409102 0250	1.295,–
315	286	103	260	95	5	3 x M16	407102 0315	1.635,–	409102 0315	1.930,–
							4189		4189	



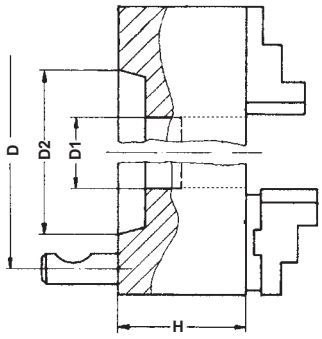
Lathe chuck with stay bolts and collar nut according to DIN 55027

Chuck Ø mm	Taper size	D mm	D1 mm	D2 mm	H mm	Three-jaw chuck art.no.	€	Four-jaw chuck art.no.	€
125	4	85	32	63.5	69	**407105** 4125	525,–	**409105** 4125	617,–
160	4	85	42	63.5	66	407105 4160	672,–	409105 4160	788,–
160	5	104.8	42	82.5	66	407105 5160	672,–	409105 5160	788,–
200	5	104.8	55	82.5	74.5	407105 5200	881,–	409105 5200	1.035,–
200	6	133.4	55	106.4	74.5	407105 6200	881,–	409105 6200	1.035,–
250	6	133.4	76	106.4	83	407105 6250	1.160,–	409105 6250	1.365,–
250	8	171.4	76	139.7	83	407105 8250	1.160,–	409105 8250	1.365,–
315	6	133.4	103	106.4	96	407105 6315	1.720,–	409105 6315	2.020,–
315	8	171.4	103	139.7	96	407105 8315	1.720,–	409105 8315	2.020,–
315	11	235	103	196.9	96	407105 1315	1.720,–	409105 8400	2.020,–
						4189		4189	



Lathe chuck with stay bolts for Camlock according to DIN 55029

Chuck Ø mm	Taper size	D mm	D1 mm	D2 mm	H mm	Three-jaw chuck art.no.	€	Four-jaw chuck art.no.	€
125	4	82.5	32	63.5	69	**407106** 4125	549,–	**409106** 4125	647,–
160	4	82.5	42	63.5	66	407106 4160	704,–	409106 4160	825,–
160	5	104.8	42	82.5	66	407106 5160	704,–	409106 5160	825,–
200	5	104.8	55	82.5	74.5	407106 5200	923,–	409106 5200	1.085,–
200	6	133.4	55	106.4	74.5	407106 6200	923,–	409106 6200	1.085,–
250	6	133.4	76	106.4	83	407106 6250	1.210,–	409106 6250	1.425,–
250	8	171.4	76	139.7	83	407106 8250	1.210,–	409106 8250	1.425,–
315	8	171.4	103	139.7	96	407106 8315	1.805,–	409106 8315	2.120,–
315	11	235	103	196.9	104	407106 1315	1.805,–	409106 1315	2.120,–
						4189		4189	



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Block jaws BL

- **Can be hardened**
- **Suitable for Röhm ZS and ZG** lathe chucks
- Material 16MnCr5
- Price per 3-piece set

for chuck Ø mm	L mm	B mm	H mm	Three-jaw chuck art.no.	€	Four-jaw chuck art.no.	€
80	37	12	26	**421210** 0080	81,80	**421211** 0080	110,–
100	48	14	33.5	421210 0100	81,80	421211 0100	110,–
125	52	18	41.5	421210 0125	81,80	421211 0125	110,–
160	61	18	47.5	421210 0160	89,50	421211 0160	119,–
200	69	20	53.5	421210 0200	107,–	421211 0200	142,–
250	90	24	67.5	421210 0250	123,–	421211 0250	166,–
315	130	34	79.5	421210 0315	186,–	421211 0315	248,–
				4189		4189	

Turning jaws DB

- **Hardened**
- **Suitable for Röhm ZS and ZG** lathe chucks
- Material 16MnCr5
- Price per 3-piece set

for chuck Ø mm	L mm	B mm	H mm	Three-jaw chuck art.no.	€	Four-jaw chuck art.no.	€
80	37	12	26	**421018** 0080	122,–	**421118** 0080	163,–
100	48	14	33.5	421018 0100	122,–	421118 0100	163,–
125	52	18	41.5	421018 0125	122,–	421118 0125	163,–
160	61	18	47.5	421018 0160	135,–	421118 0160	180,–
200	69	20	53.5	421018 0200	159,–	421118 0200	213,–
250	90	24	67.5	421018 0250	186,–	421118 0250	248,–
315	130	34	79.5	421018 0315	279,–	421118 0315	371,–
				4189		4189	

Reversible top jaws UB

- **Hardened**
- **Suitable for Röhm ZS and ZG** lathe chucks
- Material 16MnCr5
- Price per 3-piece set

for chuck Ø mm	L mm	B mm	H mm	Three-jaw chuck art.no.	€	Four-jaw chuck art.no.	€
100	47	22	29.5	**421017** 0100	169,–	**421117** 0100	224,–
125	56	26	37.5	421017 0125	169,–	421117 0125	224,–
160	66.7	28	41.5	421017 0160	169,–	421117 0160	224,–
200	79.5	30	42.5	421017 0200	176,–	421117 0200	234,–
250	95.3	36	52.5	421017 0250	186,–	421117 0250	248,–
315	109.5	42	57.5	421017 0315	279,–	421117 0315	371,–
				4189		4189	

Base jaws GB

- **Hardened**
- **Suitable for Röhm ZS and ZG** lathe chucks
- Including cheese-head screws DIN 912-12.9
- Material 16MnCr5
- Price per 3-piece set

for chuck Ø mm	L mm	B mm	H mm	Three-jaw chuck art.no.	€	Four-jaw chuck art.no.	€
100	46	14	19.5	**421015** 0100	201,–	**421115** 0100	269,–
125	55	18	24	421015 0125	201,–	421115 0125	269,–
160	65	18	27	421015 0160	201,–	421115 0160	269,–
200	78	20	28	421015 0200	211,–	421115 0200	282,–
250	92	24	35	421015 0250	222,–	421115 0250	296,–
315	108	34	40	421015 0315	334,–	421115 0315	446,–
				4189		4189	

Unstepped top jaws AB

- **Can be hardened, with cross tenon**
- **Suitable for Röhm ZS and ZG** lathe chucks
- Material 16MnCr5
- Price per 3-piece set

for chuck Ø mm	L mm	B mm	H mm	Three-jaw chuck art.no.	€	Four-jaw chuck art.no.	€
100	53	22.5	30	**421016** 0100	61,90	**421116** 0100	82,90
125	62	26.5	38	421016 0125	61,90	421116 0125	82,90
160	74	28.5	42	421016 0160	38,20	421116 0160	50,90
200	87	30.5	43	421016 0200	40,30	421116 0200	54,20
250	103	36.5	53	421016 0250	61,90	421116 0250	82,90
315	120	42.5	58	421016 0315	92,90	421116 0315	123,–
				4189		4189	

Boring jaws BB

- **Hardened**
- **Suitable for Röhm ZS and ZG** lathe chucks
- Material 16MnCr5
- Price per 3-piece set

for chuck Ø mm	L mm	B mm	H mm	Three-jaw chuck art.no.	€	Four-jaw chuck art.no.	€
80	37	12	26	**421019** 0080	122,–	**421119** 0080	163,–
100	48	14	33.5	421019 0100	122,–	421119 0100	163,–
125	52	18	41.5	421019 0125	122,–	421119 0125	163,–
160	61	18	47.5	421019 0160	135,–	421119 0160	180,–
200	69	20	53.5	421019 0200	159,–	421119 0200	213,–
250	90	24	67.5	421019 0250	186,–	421119 0250	248,–
315	130	34	79.5	421019 0315	279,–	421119 0315	371,–
				4189		4189	

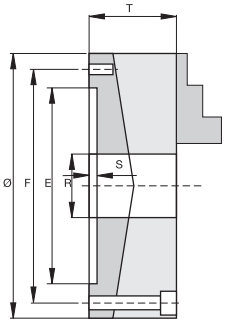
RÖHM Wedge bar chuck DURO-T

DIN 6350A **DIN 55027**

- **With jaw safety mechanism, centric clamping**
- Higher clamping forces
- Stiffer huck body (guaranteed accuracy at higher loads)
- Chuck body fully surface-hardened
- High jaw change repeatability
- Optimised wearing parts (e.g. safety shut-off alve)
- True running and axial run-out tolerance twice as accurate as specified y DIN accuracy class 1
- Enhanced corrosion protection
- Compatible with base and top jaws from other manufacturers
- **Supplied with safety key (as demanded by EN 1550), set of reversible one-piece jaws or set of base jaws with reversible top jaws**

With straight centre mount, DIN 6350 A

Ø mm	Clamping range mm	R mm	T mm	E H6 mm	S mm	F mm	Weight kg	with reversible jaws art.no.	€	Sliding + top jaws. art.no.	€
160	5 - 161	42	63	145	5	125	9.5	**405012** 0160	1.960,–	**405013** 0160	2.070,–
200	7 - 207	52	81	185	5	160	20	405012 0200	2.110,–	405013 0200	2.225,–
250	8 - 253	62	92	235	6	200	35	405012 0250	2.760,–	405013 0250	2.905,–
315	12 - 323	87	111	300	6	250	64	405012 0315	4.115,–	405013 0315	4.730,–
								4189		4189	



With short taper holding fixtu e, DIN 55027

Ø mm	Clamping range mm	R mm	T mm	Taper size	Largest taper Ø mm	Weight kg	with reversible jaws art.no.	€	Sliding + top jaws. art.no.	€
160	5 - 161	42	63	5	82.563	9.5	**405014** 1160	2.050,–	**405015** 1160	2.370,–
200	7 - 207	52	81	5	82.563	20	405014 0200	2.225,–	405015 0200	2.555,–
200	7 - 207	52	81	6	106.375	20	405014 1200	2.225,–	405015 1200	2.555,–
250	8 - 253	62	92	6	106.375	35	405014 0250	2.895,–	405015 0250	3.345,–
250	8 - 253	62	92	8	139.719	35	405014 1250	2.895,–	405015 1250	3.345,–
315	12 - 323	87	111	8	139.719	64	405014 1315	4.325,–	405015 1315	4.965,–
							4189		4189	

Continued on next page >>>

One-piece block jaw, unstepped, can be hardened

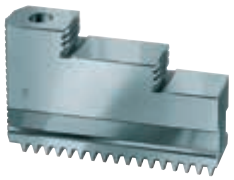
- Suitable for RÖHM-DURO, FORKARDT-F and SCHUNK-ROTA-S
- Price per 3-piece set

suitable for chuck size	L mm	B mm	H mm	art.no.	€
160	84.4	20	45	**420130** 0160	223,–
200	98.4	22	60	420130 0200	234,–
250	118.7	26	70	420130 0250	247,–
315	136.6	32	79	420130 0315	370,–

4189

One-piece reversible jaw, hardened

- Suitable for RÖHM-DURO, FORKARDT-F and SCHUNK-ROTA-S
- Price per 3-piece set

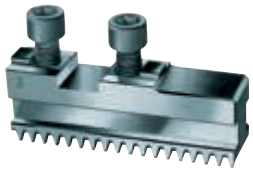


suitable for chuck size	L mm	B mm	H mm	Step height mm	Type	art.no.	€
160	77.7	20	45	7.5	Three-level	**420180** 0160	335,–
200	94.7	22	60	10	Three-level	420180 0200	352,–
250	114	26	70	14	Two-level	420180 0250	370,–
315	130	32	79	15	Two-level	420180 0315	556,–

4189

Base jaw, hardened

- Suitable for RÖHM-DURO, FORKARDT-F and SCHUNK-ROTA-S
- Price per 3-piece set



suitable for chuck size	L mm	B mm	H mm	Hole distance mm	Groove width mm	L2 mm	art.no.	€
160	74	20	29.5	32	8	8	**420260** 0160	201,–
200	90	22	35	40	12	10	420260 0200	211,–
250	110	26	40	40	12	12	420260 0250	222,–
315	125	32	46	54	12	12	420260 0315	334,–

4166

Top jaw, unstepped, can be hardened

- Suitable for RÖHM-DURO, FORKARDT-F and SCHUNK-ROTA-S
- Price per 3-piece set

suitable for chuck size	L mm	B mm	H mm	Hole distance mm	Groove width mm	Weight kg	h1 mm	L1 mm	L2 mm	art.no.	€
160	85	20	40	32	8	1.2	35.5	25	18	**420215** 0160	33,90
200	105	22	51	40	10	2	47	34	20	420215 0200	41,60
250	125	30	55	40	12	3.6	50	36	20	420215 0250	66,50
315	145	40	60	54	12	5.8	54	45	26	420215 0315	92,–

4166

Reversible top jaw, hardened

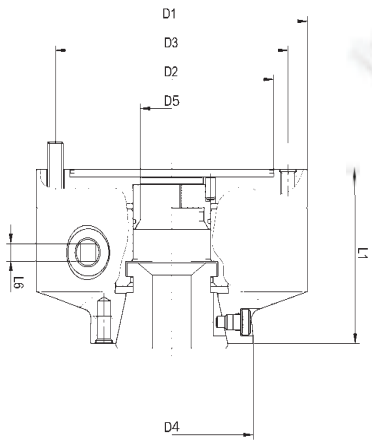
- Suitable for RÖHM-DURO, FORKARDT-F and SCHUNK-ROTA-S
- Price per 3-piece set

suitable for chuck size	L mm	B mm	H mm	Hole distance mm	Step height mm	Groove width mm	art.no.	€
200	70.5	24.4	38	40	10	10	**420145** 0200	176,–
250	92	34.4	50	40	14	12	420145 0250	186,–
315	107	35.7	56	54	15	12	420145 0315	279,–

4189

RÖHM Manual collet chuck Captis-M

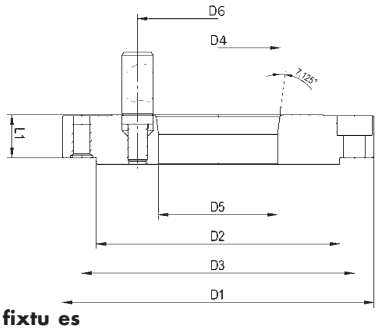
- Suitable for rotary and stationary machining
- Precise concentricity and repetition precision
- Uniform force distribution due to surrounding clamping
- Robust clamping thanks to axial infeed
- Compact design for optimal workpiece accessibility
- For clamping heads with manual changing fixtu e
- Also suitable for quick-change system ABSIS-C mandrel



Mechanical design

for type	D1 mm	D2 mm	D3 mm	D4 mm	D5 mm	L1 mm	L6 mm	Rotational speed max. r/min	art.no.	€
SK42	160	125	140	106	42.5	100	10	4500	**407500** 0042	1.785,–

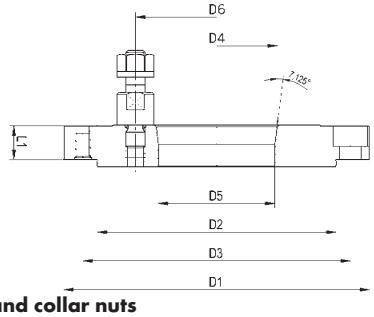
4197



Flange in accordance with DIN55029 Camlock holding fixtu es

D1 mm	D2 mm	D3 mm	D4 mm	D5 mm	D6 mm	L1 mm	art.no.	€
160	125	140	63.513	61	82.6	22	**407501** 4204	259,–
160	125	140	82.563	97.6	104.8	25	407501 4205	315,–
181	125	140	106.375	103.2	133.4	35	407501 4206	352,–
225	125	140/200	139.719	136.2	171.4	37	407501 4208	414,–

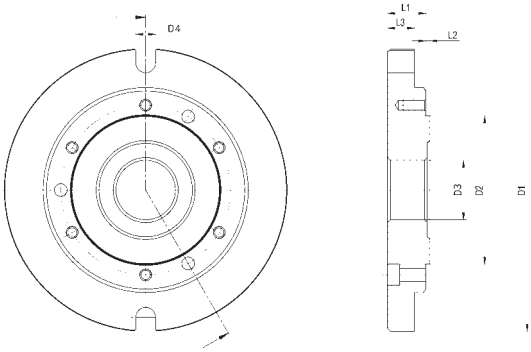
4197



Flange in accordance with DIN 55027 with stay bolts and collar nuts

D1 mm	D2 mm	D3 mm	D4 mm	D5 mm	D6 mm	L1 mm	art.no.	€
160	125	140	63.513	61	82.6	18	**407502** 4204	227,–
160	125	140	82.563	79.6	104.8	18	407502 4205	238,–
170	125	140	106.375	103.2	133.4	20	407502 4206	259,–
220	125	140/195	139.719	100	171.4	32	407502 4208	326,–

4197



Base plate for stationary machining

D1 mm	D2 mm	D3 mm	D4 mm	L1 mm	L2 mm	L3 mm	art.no.	€
240	125	42	14	27	3	16	**407503** 0052	318,–

4189

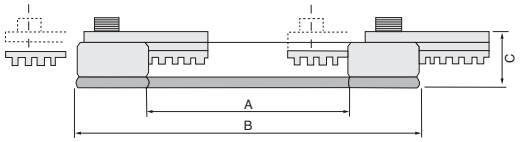
Clamping heads

SARA®

page 1071

Unscrewing device for 3 jaw chucks

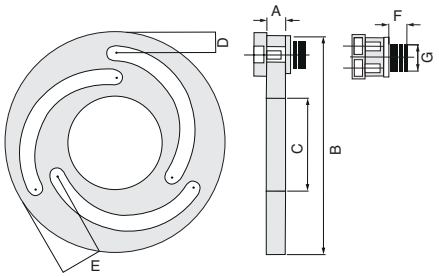
- For internal turning of soft turning jaws
- For regrinding hard turning jaws
- For external and internal workpiece clamping
- Infinite y variable adjusting range
- Quick diameter adjustment



For manual chucks

for chuck Ø mm	A mm	B mm	C mm	Adjustment range mm	max. speed r/min	art.no.	€
125 - 200	100	170	26	56-124 / 134-200	800	**421306** 0006	539,–
160 - 250	125	200	26	85-150 / 170-230	700	421306 0008	579,–
200 - 315	160	248	31	100-190 / 220-300	600	421306 0010	699,–

4114



For power chucks

for chuck Ø mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	art.no.	€
135	12	140	60	12	28	9	13	**421307** 1005	217,–
170	12	168	80	12	32	9	16.5	421307 1006	239,–
210	12	218	115	15	36	9	18.5	421307 1008	263,–
254	12	258	150	17	40	9	18.5	421307 1010	285,–
300	15	316	188	21	50	9	22.5	421307 1012	440,–
380	20	380	230	23	52	16	31	421307 1015	819,–

4114

Square ring spanner

DIN 248

- Special steel
- Hardened, tempered to a burnished tone
- Continuous interior quadratic

Wr. width mm	Head Ø mm	L mm	art.no.	€
8	17	160	**401576** 0008	29,85
10	21	195	401576 0010	31,45
12	24	235	401576 0012	33,75
14	27	270	401576 0014	39,05

4159

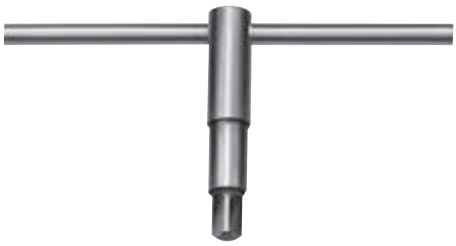
Wr. width mm	Head Ø mm	L mm	art.no.	€
17	31	315	401576 0017	58,30
19	35	345	401576 0019	63,50
22	39	385	401576 0022	78,80
24	43	415	401576 0024	83,40

4159

Square pin key

DIN 905

- Special steel
- Shank and cross bar hardened and tempered to a burnished shade
- Pressed-in cross bar



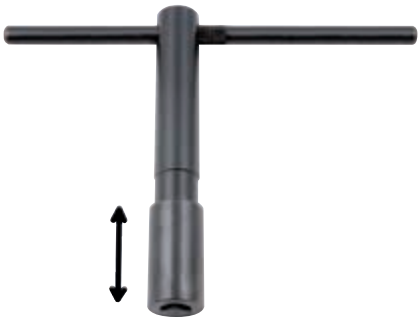
Wr. width mm	Lateral shank length mm	Head Ø mm	Shank length mm	art.no.	€
4	160	12	60	**401574** 0004	17,15
5	160	12	60	401574 0005	16,25
6	160	12	80	401574 0006	16,90
7	160	14.6	80	401574 0007	19,85
8	180	16	80	401574 0008	18,50
9	180	16	80	401574 0009	19,70
10	200	20	100	401574 0010	23,05
				4159	

Wr. width mm	Lateral shank length mm	Head Ø mm	Shank length mm	art.no.	€
11	200	20	100	401574 0011	23,85
12	250	24	100	401574 0012	25,–
13	250	24	100	401574 0013	27,30
14	320	28	120	401574 0014	30,10
17	400	34	160	401574 0017	47,35
19	400	36	200	401574 0019	56,20
				4159	

Safety square pin key

DIN 905

- Special steel
- Shank and cross bar hardened and tempered to a burnished shade
- Designed to avoid being accidentally left in the lathe chuck



Wr. width mm	Shank length mm	for chuck Ø mm	art.no.	€
6	110	80 - 85	**401571** 0006	43,10
8	130	100 - 110	401571 0008	43,10
9	130	125 - 140	401571 0009	43,10
10	160	160	401571 0010	54,20
11	160	200 - 230	401571 0011	54,20
			4189	

Wr. width mm	Shank length mm	for chuck Ø mm	art.no.	€
12	160	250 - 270	401571 0012	65,30
14	200	315	401571 0014	76,30
17	250	400	401571 0017	110,–
19	250	500 - 630	401571 0019	153,–
			4189	

Square socket key

DIN 904

- Special steel
- Shank and cross bar hardened and tempered to a burnished shade
- Pressed-in cross bar

Wr. width mm	Lateral shank length mm	Head Ø mm	Shank length mm	art.no.	€
4	160	12	60	**401572** 0004	16,25
5	160	12	60	401572 0005	17,25
6	160	12	80	401572 0006	17,70
7	160	14.6	80	401572 0007	20,85
8	180	16	80	401572 0008	20,75
9	180	18	100	401572 0009	22,75
				4159	

Wr. width mm	Lateral shank length mm	Head Ø mm	Shank length mm	art.no.	€
10	200	20	100	401572 0010	22,75
12	250	24	100	401572 0012	28,95
14	320	28	120	401572 0014	38,05
17	400	34	160	401572 0017	55,10
19	400	36	200	401572 0019	59,70
				4159	

SARA® Hollow spindle stop

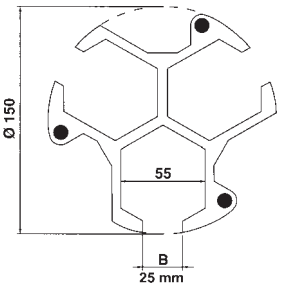
- **Not suitable for NC machines**
- Comprising clamping body, extension and special key
- For lathes
- For limiting lengths during one-off and mass p oduction
- Special key for clamping in and releasing from the machine spindle

Clamping range mm	art.no.	€
20 - 27	**421302** 2027	110,–
25 - 33	421302 2533	127,–
32 - 41	421302 3241	135,–
40 - 50	421302 4050	158,–
	4166	

Clamping range mm	art.no.	€
48 - 60	421302 4860	179,–
58 - 76	421302 5876	210,–
75 - 96	421302 7596	290,–
94 - 110	421302 9411	355,–
	4166	

Workpiece stop

- **For three-jaw chucks, for clamping short parts**
- Material: Aluminium
- Three magnets for easy attachment to the lathe chuck
- Ground supporting surfaces
- Suitable for three-jaw chucks with jaw widths up to 55 mm, for Ø 15 - 130 mm workpieces
- The dimension W=25mm, must be milled in accordance with the jaw width



Individual

H mm	art.no.	€
15	**421300** 0015	66,50
20	421300 0020	66,50
25	421300 0025	72,50
30	421300 0030	72,50
35	421300 0035	75,–
	4153	

Set in a wooden box

Contents per set	art.no.	€
Workpiece stop H = 15, 20, 25, 30, 35 mm (1 of each)	**421301** 1535	345,–
	4153	

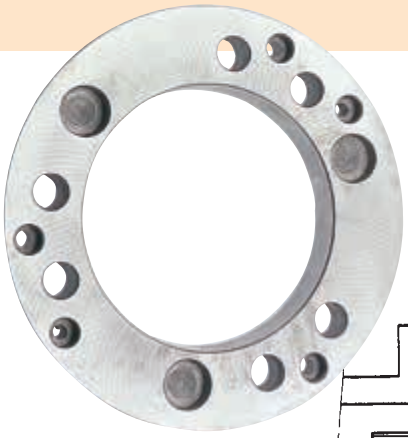
Clamping jaw finder

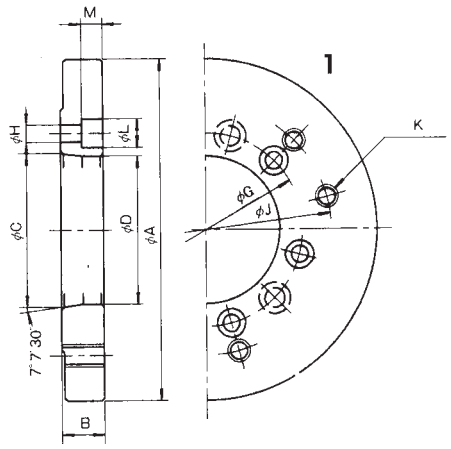
- Jaws for approx. 3,000 di˜erent chuck types
- Find the right jaws for your chuck quickly and easily.
- Easy to find and quick to order with lightning-fast delivery!

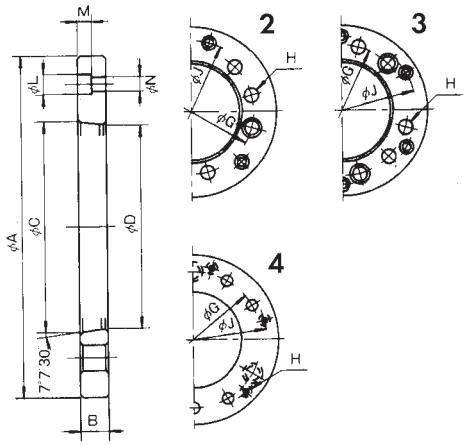
www.spannbackenfinder.de

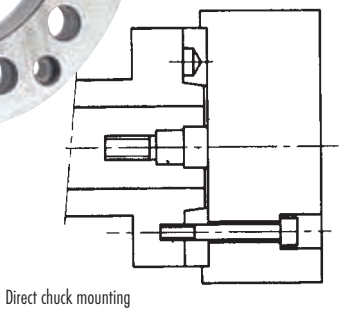
kitagawa EUROPE Power chuck flan e

- Precision flan e featuring an all-steel design
- **For chucks with centre mounts in accordance with DIN 6353**
- **Spindle-side design: Short taper in accordance with DIN 55026 and DIN 55021**
- **Compatible with: BT200 / B200 / BB200**
- Supplied without flan e fastening screws

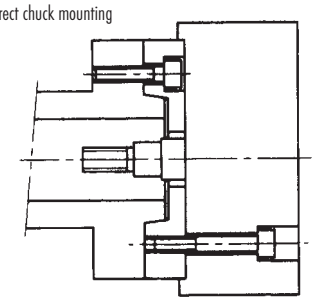








Direct chuck mounting
Indirect chuck mounting



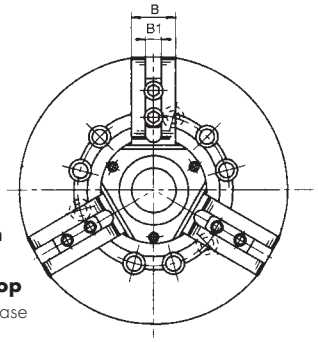
A mm	B mm	C mm	D mm	G mm	H mm	J mm	K mm	L mm	M mm	N mm	Illustration	Chuck Ø mm	Size spindle nose	For 2-jaw chucks art.no.	€	For 3-jaw chucks art.no.	€
140	15	82.563	79.7	104.78	12	116	-	11	7	6.6	2	160/169	A2-5	**413010** 1005	233,–	**413001** 1005	243,–
140	41	106.375	103	133.35	13.5	104.78	M10	20	24	-	1	160/169	A2-6	413010 1006	237,–	413001 1006	243,–
170	22	82.563	79.7	104.78	11	133.35	M12	17	11	-	1	200/210	A2-5	413010 2005	299,–	413001 2005	299,–
170	17	106.375	103	133.35	13.5	150	-	11	7	6.6	3	200/210	A2-6	413010 2006	299,–	413001 2006	299,–
220	25	106.375	103	133.35	13.5	171.45	M16	20	13.5	-	1	254/304	A2-6	413010 3006	409,–	413001 3006	409,–
220	18	139.719	136	171.45	17	190	-	14	10	9	4	254/304	A2-8	413010 3008	392,–	413001 3008	409,–
300	33	139.719	140	171.45	17	235	M20	25	17	-	1	381	A2-8	413010 4008	570,–	413001 4008	570,–
300	22	196.869	192.1	235	21	260	-	17	11	11	4	381	A2-11	413010 4011	570,–	413001 4011	570,–

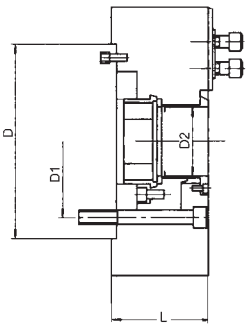
4114 4114

kitagawa EUROPE Wedge hook power chuck BB

DIN 6353

- **Model BB**
- **With enlarged through-hole**
- All-steel design
- Hardened and ground guides
- High true-running accuracy
- Lubrication fitting in very base jaw
- **Centre mount in accordance with DIN 6353**
- Supplied without flan e and **without top jaws**; includes 1.5 mm x 60° toothed base jaws, T-slot nuts, chuck and jaw fastening screws, unthreaded drawbar nuts and a special assembly key
- **Threaded drawbar nuts available on request**



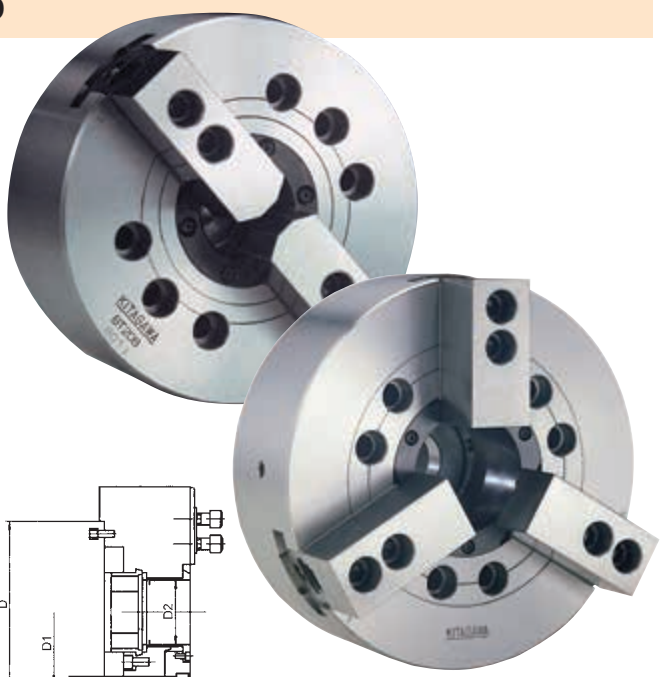


model	Chuck Ø mm	L mm	B mm	B1 H7 mm	D H6 mm	D1 mm	D2 mm	Jaw lift distance mm	Piston stroke mm	max. clamp force kN	max. actuating force kN	max. speed r/min	Clamping range mm	U max.	BB chuck, complete art.no.	€
BB 206	170	81	31	12	140	104.8	53	5.5	12	58.5	20	6000	19 - 170	M60 x 2	**420131** 0060	2.341,–
BB 208	210	91	35	14	170	133.4	66	7.4	16	99	32	5000	23 - 210	M75 x 2	420131 0080	2.674,–
BB 210	254	100	40	16	220	171.5	81	8.8	19	126	49	4500	41 - 254	M90 x 2	420131 0210	3.031,–
BB 212	315	108	50	21	300	235	106	10.6	23	153	59	3500	47 - 315	M115 x 2	420131 0212	3.967,–

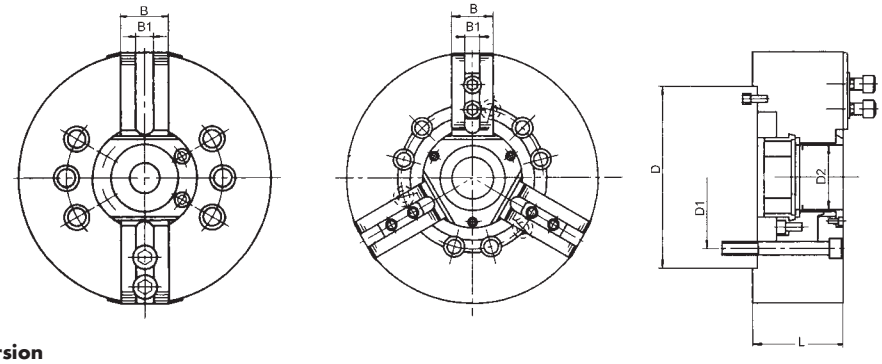
4114

kitagawa EUROPE Wedge hook power chuck B/BT-200

DIN 6353



- **Model B/BT-200**
- **Large through-hole**
- All-steel design
- Hardened and ground guides
- High true-running accuracy
- Lubrication fitting in very base jaw
- Centre mount in accordance with DIN 6353
- Supplied without flan e and **without top jaws**; includes 1.5 mm x 60° toothed base jaws, T-slot nuts, chuck and jaw fastening screws, unthreaded drawbar nuts, special assembly key
- Further sizes and models available on request
- **Threaded drawbar nuts available on request**



2-jaw version

model	Chuck Ø mm	L mm	B mm	B1 H7 mm	D H6 mm	D1 mm	D2 mm	Jaw lift distance mm	Piston stroke mm	max. clamp force kN	max. actuating force kN	max. speed r/min	Clamping range mm	Weight kg	U max.	art.no.	€
BT-206	169	81	26	12	140	104.8	45	5.5	12	38	14.5	6000	14 - 169	11.5	M55 x 2	**410110** 0206	2.801,–
BT-208	210	91	35	14	170	133.4	52	7.4	16	57.3	23.2	5000	14 - 210	21.3	M60 x 2	410110 0208	2.665,–
BT-210	254	100	40	16	220	171.4	75	8.8	19	74	28.5	4200	31 - 254	33.5	M85 x 2	410110 0210	2.870,–
BT-212	304	110	50	21	220	171.4	91	106	23	96	36.7	3300	34 - 304	52	M100 x 2	410110 0212	3.770,–

4114

3-jaw version

model	Chuck Ø mm	L mm	B mm	B1 H7 mm	D H6 mm	D1 mm	D2 mm	Jaw lift distance mm	Piston stroke mm	max. clamp force kN	max. actuating force kN	max. speed r/min	Clamping range mm	Weight kg	U max.	art.no.	€
B-204	110	59	23	10	85	70.6	26	5.4	10	28.5	14	8000	7 - 110	4	M32 x 1.5	**410101** 0204	2.097,–
B-205	135	60	23	10	110	82.6	33	5.4	10	36	17.5	7000	12 - 135	6.7	M40 x 1.5	410101 0205	2.155,–
B-206	169	81	26	12	140	104.8	45	5.5	12	57	22	6000	16 - 168	11.9	M55 x 2	410101 0206	1.689,–
B-208	210	91	35	14	170	133.4	52	7.4	16	86	34.8	5000	13 - 210	22.3	M60 x 2	410101 0208	1.773,–
B-210	254	100	40	16	220	171.4	75	8.8	19	111	43	4200	31 - 254	34.5	M85 x 2	410101 0210	2.071,–
B-212	304	110	50	21	220	171.4	91	10.6	23	144	55	3300	34 - 304	55.3	M100 x 2	410101 0212	2.875,–

4114

kitagawa EUROPE Reversible top jaws, 1.5 mm x 60°

- **For chuck types: BT200 / B200 / BB200**
- **Hardened**
- Material 16 MnCr 5
- Price per 3-piece set
- **No reversible jaws are available for BT204, BT205 and BT212**
- **For other sizes, please visit www.spannbackenfinde .de**

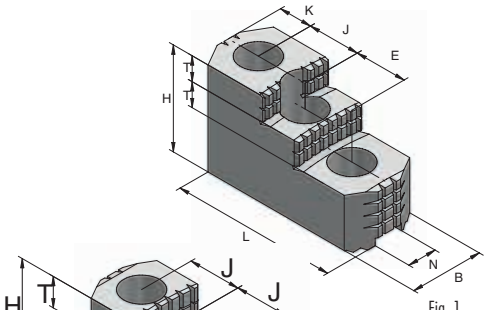


Fig. 1

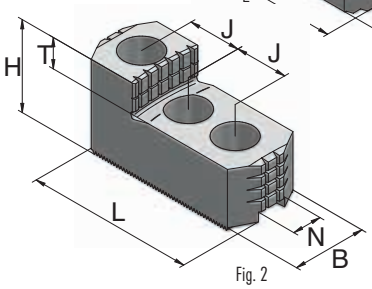


Fig. 2

for chuck Ø mm	B mm	H mm	L mm	T mm	N mm	J mm	Screw	Weight kg	Illustration	art.no.	€
169	31	36	67	12	12	20	M10	1	2	**420240** 0006	245,–
210	35	51	87	12	14	25	M12	2.5	1	420240 0008	365,–
254	40	54	101	13	16	30	M12	3.5	1	420240 0010	405,–
304	50	52	103	17	21	30	M16	4.3	2	420240 0212	370,–

4166

kitagawa EUROPE Top jaws, 1.5 mm x 60°

- **For chuck types: BT200 / B200 / BB200**
- Material C15
- Price per 3-piece set
- **For aluminium jaws and other sizes, please visit www.spannbackenfinde .de**

for chuck Ø mm	B mm	H mm	L mm	N mm	K+J mm	Screw	Weight kg	Illustration	art.no.	€
110/135	22	24	52	10	12+14	M8	0.5	2	**420210** 0205	48,50
110/135	24	50	52	10	12+14	M8	1.1	2	420210 2055	45,40
169	30	31	72	12	15+20	M10	1.2	1	420210 0006	40,50
169	30	31	82	12	15+20	M10	1.2	2	420210 0601	53,50
169	30	50	72	12	15+20	M10	2	2	420210 0650	57,50
210	35	37	95	14	24+25	M12	2.2	2	420210 0008	47,50
210	35	37	95	14	24+25	M12	2.2	1	420210 0108	47,90
210	35	37	102	14	20+25	M12	2.9	2	420210 0801	56,–
210	35	79	95	14	24+25	M12	5	2	420210 0810	60,50
254	40	42	110	16	30+30	M12	3.5	2	420210 0010	50,50
254	40	42	125	16	30+30	M12	4.1	2	420210 1001	60,–
254	40	60	90	16	21+30	M12	4.2	1	420210 1010	64,50
254	40	60	110	16	30+30	M12	5.2	2	420210 1060	64,50
254	40	79	110	16	30+30	M12	8.1	1	420210 1080	76,50
304	50	50	129	21	40+30	M16	6	1	420210 0212	66,–
304	50	50	145	21	30+30	M16	6.7	2	420210 2121	90,–
304	50	79	129	21	40+30	M16	9.7	1	420210 2128	124,–

4166

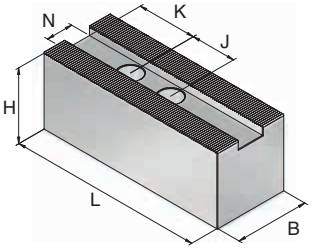


Fig. 1

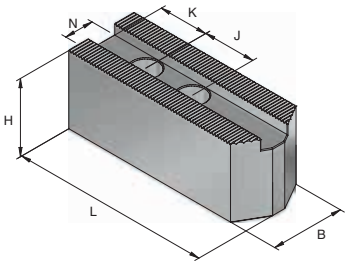


Fig. 2

kitagawa EUROPE Gripper top jaws for external clamping, 1.5 mm x 60°

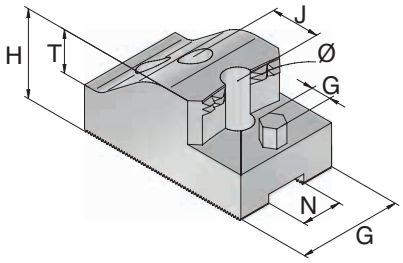
- **For chuck types: B200 / BB200**
- **Hardened**
- Material 16MnCr5
- Price per set of 3 units
- **For clamping range for BB200, please see www.spannbackenfinde .de**

for chuck Ø mm	Clamping range mm	art.no.	€
169	26 - 51	**420370** 0605	304,60
169	41 - 67	420370 0606	304,60
169	57 - 83	420370 0608	304,60
169	71 - 97	420370 0609	304,60
169	87 - 113	420370 0611	304,60
169	113 - 139	420370 0613	304,60
210	34 - 64	420370 0806	319,80
210	61 - 91	420370 0809	319,80
210	91 - 121	420370 0812	319,80
210	121 - 152	420370 0815	319,80
210	143 - 174	420370 0817	319,80

4166

for chuck Ø mm	Clamping range mm	art.no.	€
210	180 - 211	420370 0821	319,80
254	42 - 82	420370 1008	358,20
254	83 - 124	420370 1012	358,20
254	127 - 168	420370 1016	358,20
254	172 - 213	420370 1021	358,20
254	207 - 248	420370 1025	358,20
304	47 - 110	420370 1211	427,–
304	107 - 170	420370 1217	427,–
304	173 - 237	420370 1224	427,–
304	237 - 301	420370 1230	427,–

4166



Support bolts

- **Hardened, for gripper jaws**
- AF size: M6 = 10, M8 = 13
- Price per 3-piece set

H mm	Thread M6 art.no.	€	Thread M8 art.no.	€
5	**420175** 0005	16,70	**420176** 0005	16,70
10	420175 0010	16,70	420176 0010	16,70
15	420175 0015	16,70	420176 0015	19,20
20	420175 0020	16,70	420176 0020	20,40

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kitagawa EUROPE Slot nuts

- **For chuck types: BT200 / B200**
- Including cheese-head screws DIN 912-12.9
- Price per 3-piece set

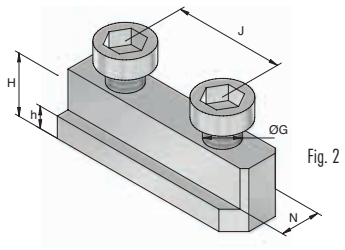


Fig. 2

for chuck Ø mm	H mm	h mm	N mm	J mm	G mm	Cyl. Screws DIN 912	art.no.	€
135	15	5.5	10	14	M8	M8 x 20	**420603** 0005	79,50
169	18.5	7.5	12	20	M10	M10 x 25	420603 0020	82,–
210	20.5	8.2	14	25	M12	M12 x 30	420603 0030	88,50
254	21.5	8.5	16	30	M12	M12 x 30	420603 0040	95,50
304	28	11.5	21	30	M16	M16 x 35	420603 0050	121,–
381	45.5	16.5	24/22	43	M20	M20 x 45	420603 0055	210,–

4166

Lubricant

410199 0010

4101990011

Grease gun

Contents	art.no.	€
200 ml	**410199** 0011	32,50
400 g	410199 0010	67,–

4114

410199 0013

410199 0012

Chuck grease

Contents	art.no.	€
1 kg	**410199** 0012	85,50
400 g	410199 0013	36,10

4114

Lubrication fittin

Designation	art.no.	€
For Kitagawa power chucks	**410199** 0002	5,20

4114

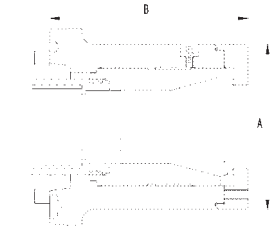
Clamping jaw finder

- Jaws for approx. 3,000 di˜erent chuck types
- Find the right jaws for your chuck quickly and easily.
- Easy to find and quick to order with lightning-fast delivery!

www.spannbackenfinder.de

kitagawa EUROPE CRL power-operated collet chuck

- All-steel design, hardened and precision-ground
- For multi-range and steel collets in accordance with DIN 6343, 173 E or 185 E
- 2 sizes: up to material Ø 42 mm, or up to material Ø 60 mm
- Other sizes for a maximum material Ø 36 mm, 54 mm and 66 mm are available on request
- Equipped for use with a length stop, but only in combination with multi-range collets.
- For bar work on CNC lathes
- Especially for high speeds and true-running accuracies
- Supplied with chuck fastening screws and thrust collar (unthreaded)
- Without collets
- **Threaded drawbar nuts available on request**



CRL-42 for 173E dead-length collets

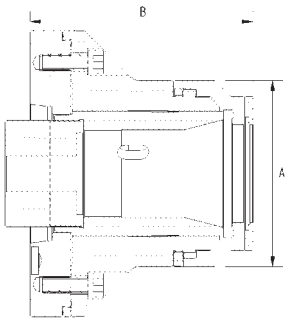
model	Holding fixtu es	A mm	B mm	U max.	max. actuating force kN	max. clamp force kN	max. speed r/min	Weight kg	Str. mount art.no.	€	Short taper art.no.	€
CRL-42	Straight	110	133	M55 x 1.5	25	55	7100	8.8	**415001** 0001	809,–		
CRL-42/5	Short taper size 5	110	143	M55 x 1.5	25	55	7100	8.4			**415010** 0005	859,–
CRL-42/6	Short taper size 6	110	145	M55 x 1.5	25	55	7100	10			415010 0006	859,–
									4114		4114	

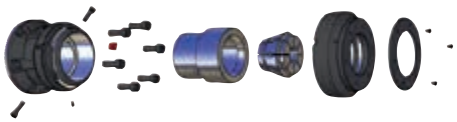
CRL-60 for 185E dead-length collets

model	Holding fixtu es	A mm	B mm	U max.	max. actuating force kN	max. clamp force kN	max. speed r/min	Weight kg	Str. mount art.no.	€	Short taper art.no.	€
CRL-60	Straight	138	148	M70 x 1.5	30	60	6300	14.2	**415020** 0001	1.170,–		
CRL-60/6	Short taper size 6	138	160	M70 x 1.5	30	60	6300	14.2			**415030** 0006	1.170,–
CRL-60/8	Short taper size 8	138	156	M70 x 1.5	30	60	6300	17.7			415030 0008	1.170,–
									4114		4114	

kitagawa EUROPE QCRL / QD-CRL power-operated collet chuck

- **Model QD-CRL comes without a flan e - direct short taper holding fixtu e included**
- **Bayonet fixing all ws collets to be changed quickly**
- For Ø 42 mm (173E) up to Ø 60 mm (185E), version up to Ø 80 mm (193E) and
- collet reducer from 185E to 173E available on request
- For bar work on CNC lathes, especially for high speeds and true-running accuracies
- Supplied with chuck fastening screws and thrust collar (unthreaded), without collets
- **Threaded drawbar nuts available on request**





QCRL-42 for 173E dead-length collets

model	Holding fixtu es	A mm	B mm	U max.	max. actuating force kN	max. clamp force kN	max. speed r/min	Weight kg	Str. mount art.no.	€	Short taper art.no.	€
QCRL-42	Straight Ø140	113	149	M58 x 1.5	25	55	7100	13.5	**415101** 0001	946,–		
QD-CRL-42/5	Short taper 5	113	143	M58 x 1.5	25	55	7100	13.5			**415110** 1005	922,–
QCRL-42/6	Short taper 6	113	143	M58 x 1.5	25	55	7100	13.5			415110 0006	983,–
									4114		4114	

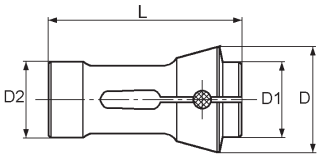
QCRL-60 for 185E dead-length collets

model	Holding fixtu es	A mm	B mm	U max.	max. actuating force kN	max. clamp force kN	max. speed r/min	Weight kg	Str. mount art.no.	€	Short taper art.no.	€
QCRL-60	Straight Ø170	143	177	M75 x 1.5	30	60	6300	29	**415120** 0001	1.182,–		
QD-CRL-60/6	Short taper 6	143	171	M75 x 1.5	30	60	6300	29			**415130** 1006	1.232,–
QCRL-60/8	Short taper 8	143	171	M75 x 1.5	30	60	6300	29			415130 0008	1.344,–
									4114		4114	

FAHRION® PRAZISION Dead-length collets

DIN 6343

- Hardened and ground
- True running accuracy:
  Ø 1-10 mm ≤ 20 µm
  Ø 11-30 mm ≤ 30 µm
  Ø 31-60 mm ≤ 40 µm
- Collapse maximum 0.1 mm of nominal diameter
- Smooth bore up to Ø 8 mm, transverse grooves from Ø 9 mm
- Square/hex.: up to 12 mm = smooth bore, from 13 mm = with transverse grooves
- Collets with longitudinal and transverse grooving available on request, as well as multi-range collets in a variety of designs



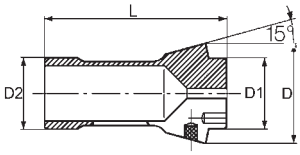
Clamp Ø mm	173E round D=60 mm D1=50 mm D2=48 mm L=94 mm		173E square D=60 mm D1=50 mm D2=48 mm L=94 mm		173E hexagonal D=60 mm D1=50 mm D2=48 mm L=94 mm		185E round D=84 mm D1=73 mm D2=66 mm L=110 mm		185E square D=84 mm D1=73 mm D2=66 mm L=110 mm		185E hexagonal D=84 mm D1=73 mm D2=66 mm L=110 mm	
	art.no.	€	art.no.	€	art.no.	€	art.no.	€	art.no.	€	art.no.	€
1	**433035** 0010	108,50										
1.5	433035 0015	72,50										
2	433035 0020	72,50										
2.5	433035 0025	72,50										
3	433035 0030	54,50										
3.5	433035 0035	54,50										
4	433035 0040	54,50					**433041** 0040	115,–				
4.5	433035 0045	54,50										
5	433035 0050	54,50					433041 0050	115,–				
5.5	433035 0055	54,50										
6	433035 0060	54,50	**433037** 0060	95,50	**433039** 0060	95,50	433041 0060	115,–				
6.5	433035 0065	54,50										
7	433035 0070	54,50	433037 0070	79,–	433039 0070	79,–	433041 0070	115,–	**433043** 0070	139,50		
7.5	433035 0075	54,50										
8	433035 0080	54,50	433037 0080	79,–	433039 0080	79,–	433041 0080	115,–	433043 0080	139,50	**433045** 0080	139,50
9	433035 0090	54,50	433037 0090	79,–	433039 0090	79,–	433041 0090	115,–	433043 0090	139,50	433045 0090	139,50
10	433035 0100	54,50	433037 0100	79,–	433039 0100	79,–	433041 0100	115,–	433043 0100	139,50	433045 0100	139,50
11	433035 0110	54,50	433037 0110	79,–	433039 0110	79,–	433041 0110	115,–	433043 0110	139,50	433045 0110	139,50
12	433035 0120	54,50	433037 0120	79,–	433039 0120	79,–	433041 0120	115,–	433043 0120	139,50	433045 0120	139,50
13	433035 0130	54,50	433037 0130	79,–	433039 0130	79,–	433041 0130	115,–	433043 0130	139,50	433045 0130	139,50
14	433035 0140	54,50	433037 0140	79,–	433039 0140	79,–	433041 0140	115,–	433043 0140	139,50	433045 0140	139,50
15	433035 0150	54,50			433039 0150	79,–	433041 0150	115,–			433045 0150	139,50
16	433035 0160	54,50	433037 0160	79,–	433039 0160	79,–	433041 0160	115,–	433043 0160	139,50	433045 0160	139,50
17	433035 0170	54,50			433039 0170	79,–	433041 0170	115,–			433045 0170	139,50
18	433035 0180	54,50	433037 0180	79,–			433041 0180	115,–	433043 0180	139,50		
19	433035 0190	54,50			433039 0190	79,–	433041 0190	115,–			433045 0190	139,50
20	433035 0200	54,50	433037 0200	100,50			433041 0200	115,–	433043 0200	161,–		
21	433035 0210	54,50					433041 0210	115,–				
22	433035 0220	54,50	433037 0220	100,50	433039 0220	79,–	433041 0220	115,–	433043 0220	161,–	433045 0220	139,50
23	433035 0230	54,50					433041 0230	115,–				
24	433035 0240	54,50			433039 0240	79,–	433041 0240	115,–			433045 0240	139,50
25	433035 0250	54,50	433037 0250	100,50			433041 0250	115,–	433043 0250	161,–		
26	433035 0260	54,50					433041 0260	115,–				
27	433035 0270	54,50			433039 0270	79,–	433041 0270	115,–			433045 0270	139,50
28	433035 0280	54,50	433037 0280	100,50			433041 0280	115,–	433043 0280	161,–		
29	433035 0290	54,50					433041 0290	115,–				
30	433035 0300	54,50			433039 0300	100,50	433041 0300	115,–	433043 0300	187,–	433045 0300	161,–
31	433035 0310	54,50					433041 0310	115,–				
32	433035 0320	54,50			433039 0320	100,50	433041 0320	115,–	433043 0320	187,–	433045 0320	161,–
33	433035 0330	54,50					433041 0330	115,–				
34	433035 0340	54,50					433041 0340	115,–				
35	433035 0350	54,50					433041 0350	115,–				
36	433035 0360	54,50			433039 0360	100,50	433041 0360	115,–	433043 0360	187,–	433045 0360	161,–
37	433035 0370	54,50					433041 0370	115,–				
38	433035 0380	54,50					433041 0380	115,–			433045 0380	187,–
39	433035 0390	54,50					433041 0390	115,–				
	4119		4119		4119		4119		4119		4119	

Clamp Ø mm	173E round D=60 mm D1=50 mm D2=48 mm L=94 mm art.no.	€	173E square D=60 mm D1=50 mm D2=48 mm L=94 mm art.no.	€	173E hexagonal D=60 mm D1=50 mm D2=48 mm L=94 mm art.no.	€	185E round D=84 mm D1=73 mm D2=66 mm L=110 mm art.no.	€	185E square D=84 mm D1=73 mm D2=66 mm L=110 mm art.no.	€	185E hexagonal D=84 mm D1=73 mm D2=66 mm L=110 mm art.no.	€
40	433035 0400	54,50					433041 0400	115,–	433043 0400	187,–		
41	433035 0410	54,50					433041 0410	115,–			433045 0410	187,–
42	433035 0420	54,50					433041 0420	115,–				
43							433041 0430	115,–				
44							433041 0440	115,–				
45							433041 0450	115,–				
46							433041 0460	115,–			433045 0460	196,–
47							433041 0470	115,–				
48							433041 0480	115,–				
49							433041 0490	115,–				
50							433041 0500	115,–			433045 0500	196,–
51							433041 0510	115,–				
52							433041 0520	115,–				
53							433041 0530	115,–				
54							433041 0540	115,–				
55							433041 0550	115,–				
56							433041 0560	115,–				
57							433041 0570	115,–				
58							433041 0580	115,–				
59							433041 0590	115,–				
60							433041 0600	115,–				
	4119		4119		4119		4119		4119		4119	

FAHRION PRAZISION Emergency dead-length collets

DIN 6343

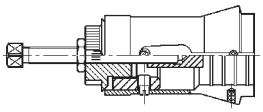
- **For internal turning**
- Hardened and tempered to approx. 45 HRc and fully ground
- Can be clamped in chucks using three removable alignment pins at the front, and can be machine-finished to he required bore diameter or with a stepped hole



Designation	D mm	D1 mm	D2 mm	L mm	Ø mm	art.no.	€
173 E	60	50	48	94	Pre-drilled to Ø 3	**433047** 0030	67,50
185 E	84	73	66	110	Pre-drilled to Ø 4	433049 0040	139,–
						4119	

SARA Internal stop for dead-length collets

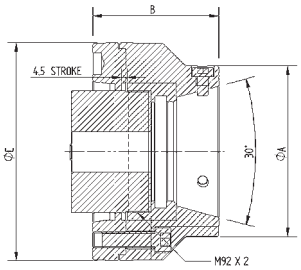
- **For dead length collets in accordance with DIN 6343**
- No collet shank deformation or impact on clamping behaviour
- Can also be used as a limit stop for hollow parts
- Can be used with round, hexagonal and square collets



for collets	art.no.	€
173 E	**433052** 0173	140,–
185 E	433052 0185	153,–
	4120	

kitagawa EUROPE DHP power-operated collet chuck

- **Model DHP65**
- Compact design
- High accuracy
- Ideal for use in initial machining due to axial tension
- Fully compatible with commercially available 65 mm clamping heads
- Easily adaptable to existing machinery
- DHP65 chucks are lightweight and can be fitted uickly
- Supplied without collets or changing fixtu es; includes blank unthreaded drawbar nut
- Additional chucks available on request
- **Threaded drawbar nuts available on request**



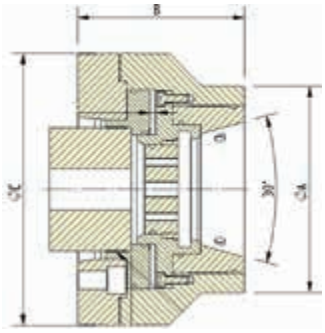
Clamping Ø max. 65 mm

model	Holding fixtu es	A mm	B mm	C mm	U max.	art.no.	€
DHP-65/5	Short taper 5	130	95	165	M70 x 2	**415201** 0005	935,–
DHP-65/6	Short taper 6	130	95	165	M85 x 2	415201 0006	935,–
DHP-65/8	Short taper 8	130	95	210	M85 x 2	415201 0008	1.057,–

4114

kitagawa EUROPE Power-operated collet chuck DKF

- **Model DKF65: clamp Ø max. 65 mm**
- Compact design
- High precision
- **Clamping without changing the axial position of the clamping head**
- Ideal for bar stock, secondary machining or inserts on a main or counter spindle
- Fully compatible with commercially available 65 mm clamping heads
- Easily adaptable to existing machinery
- Supplied without collets and switching equipment, includes blank unthreaded drawbar nut
- Threaded drawbar nuts available on request



DKF 65

- For clamping head size 65

model	Holding fixtu es	A mm	B mm	C mm	U max.	art.no.	€
DKF65/Z140	Ø140	123	137.5	167	M75 x 2	**415204** 6514	1.787,–
DKF65/A5	Short taper 5	123	137.5	167	M74 x 2	415204 6505	1.724,–
DKF65/A6	Short taper 6	123	137.5	167	M75 x 2	415204 6506	1.758,–
DKF65/A8	Short taper 8	123	161.5	201.5	M75 x 2	415204 6508	1.793,–

4114

SARA® Clamping heads SK

- For all common axial clamping systems on lathes and vices
- Tried and tested, exceptionally stable rubber-metallic compound
- High retention forces
- **Version with transverse grooves and for multi-spindle lathes available on request**

Clamping heads with smooth bore
Please indicate clamping head Ø in mm as three-digit figu e

- Order example SK42 **Ø 8.5** = 433060 1 **085**
- Order example SK65 **Ø 39.0** = 433060 4 **390**

Clamp Ø mm	**433060.... SK 42** €	**433060.... SK 65** €
4 - 5.5	136,–	
6 - 42	136,–	175,–
42.5 - 65		175,–
	4196	4196

Clamping heads with longitudinal and transverse grooves
Please indicate clamping head Ø in mm as three-digit figu e

- Order example SK42 **Ø 11.5** = 433060 3 **115**
- Order example SK65 **Ø 48.0** = 433060 6 **480**

Clamp Ø mm	**433060.... SK 42** €	**433060.... SK 65** €
10	136,–	
11 - 42	136,–	175,–
43 - 65		175,–
	4196	4196

Manual changing fixtu e

model	art.no.	€
MW 42	**433061** 0042	375,–
MW 65	433061 0065	385,–
	4196	

... and stable.

ATORN®
Performance demands quality

Powered tools

INFO

For CNC lathes

- Tools for complete production on CNC lathes
- Drilling, milling and thread cutting in one clamping operation
- Tools for axial or radial machining with an extremely wide range of diffe ent tool holders
- German production with in-house repair service

~

- **Use** on all common CNC lathes which are suitable for powered tools

~

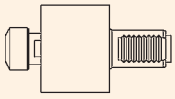
- No conversion from turning to milling
- Tools in an extremely wide range of versions
- Lower fixtu e costs since second clamping operation is not required
- Compliance with the tightest shape and position-related tolerances, because the workpiece is produced in a single clamping operation

~

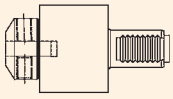
- **Available:** Modular systems such as Sandvik Capto, ABS, internal or external coolant supply, high-speed transmission ratios, collets, Weldon and Wistle Notch, milling arbours, thread cutting chucks, etc.

Special solutions on request

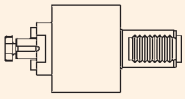
Axial drilling and milling head with collet



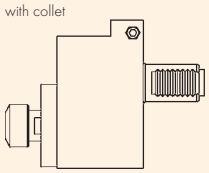
Axial drilling and milling head with Weldon



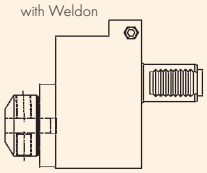
Axial drilling and milling head with combination arbour



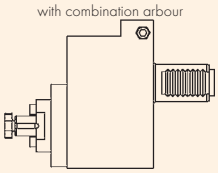
Axial drilling and milling head off-axis with collet



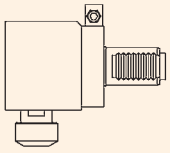
Axial drilling and milling head off-axis with Weldon



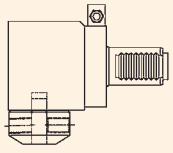
Axial drilling and milling head off-axis with combination arbour



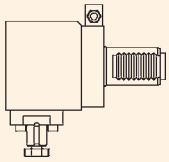
Angle drilling and milling head with collet



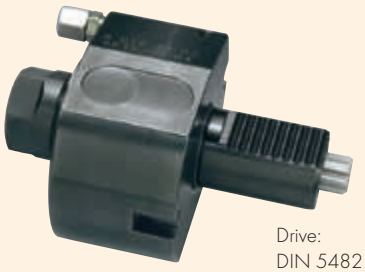
Angle drilling and milling head with Weldon



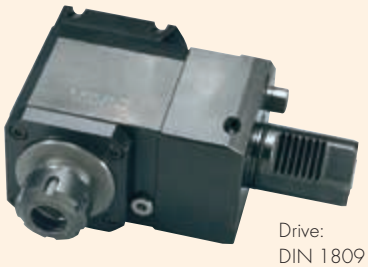
Angle drilling and milling head with combination arbour



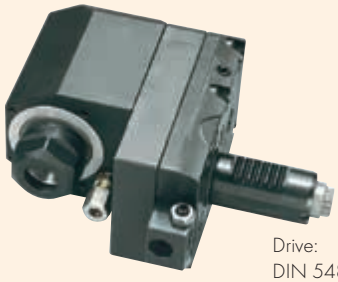
Please ask for non-binding individual quotations for powered tools.



Drive:
DIN 5482
e.g. Sauter
disc revolver



Drive:
DIN 1809
B10 dihedron
Shank Ø 40 mm



Drive:
DIN 5480
e.g. Sauter
disc revolver

Drive:
DIN 1809
e.g. Duplomatic
revolver

Powered tools with quick-change system

INFO

The easy-quick quick-change system with an adjustment and changing accuracy of 5 µ for turning and machining centres.

- High fl xibility
- Extremely short tooling times
- No laborious adjustment during tool changes
- Modular systems such as Sandvik Capto, ABS also available

DIN 6359 milling cutter holding fixture (long version)

DIN 6359 milling cutter holding fixture (short version)

Collet chuck (long version)

Collet chuck (short version)

Transverse slot shell-type arbour

Powered tools for machining centres

INFO

High-performance powered tools in machining centres for greater efficiency an increased precision in production parts.

Angle, drilling and milling head can be rotated through 360°

Angle, drilling and milling head can be swivelled ± 90° can be rotated through 360°

Angle, drilling and milling head

High-speed spindles Toodle Blue and Toodle Green

- **Toodle Blue, driven with coolant**
- **Toodle Green, driven with minimal lubrication**
- Turbine-driven high-speed spindle
- Rotational speeds of up to 75,000 rpm
- Consistent and high true running accuracy thanks to interchangeable bearings and turbine
- Can also be used with upright machine spindle
- Most demanding machine applications with a standard tool holder
- Affo dable transformation of existing machine centres with standard spindles into high-speed and ultra-modern machining centres
- **Compatible with any sealed chuck with internal coolant supply**
  Example: SARA collet chucks ER40 Art. No. 4310034026 with sealed collet ER40 - Ø25 Art. No. 4331354025
- **NOT compatible with milling cutter holder DIN 6359 (Weldon holders)**,
  Cutting edge diameter must be smaller than **shank diameter**

Toodle Blue high-speed spindle

- **Coolant pressure at the spindle: 10-60 bar**
- Coolant-driven
- Supplied without bearings and turbine

Ø mm	Length mm	art.no.	€
25	40	**430000** 0025	439,–
		4193	

Toodle Blue high-speed spindle 90°

- **Coolant pressure at the spindle: 10-60 bar**
- Coolant-driven
- Supplied without bearings and turbine

Holding fixtu e Ø mm	art.no.	€
16 mm	**430001** 0090	589,–
	4193	

Toodle Green high-speed spindle

- **Air pressure at the spindle: 3-5 bar**
- Driven by minimum volume lubrication
- Supplied without bearings and turbine

Ø mm	Length mm	art.no.	€
25	40	**430002** 0001	469,–
		4193	

Mounting device

for shank Ø mm	art.no.	€
3	**430200** 0003	67,–
4	430200 0004	67,–
6	430200 0006	67,–
	4193	

Installation set consisting of

- 2 ball bearings
- 1 turbine

for shank Ø mm	art.no.	€
3	**430100** 0003	30,–
4	430100 0004	30,–
6	430100 0006	30,–
	4193	

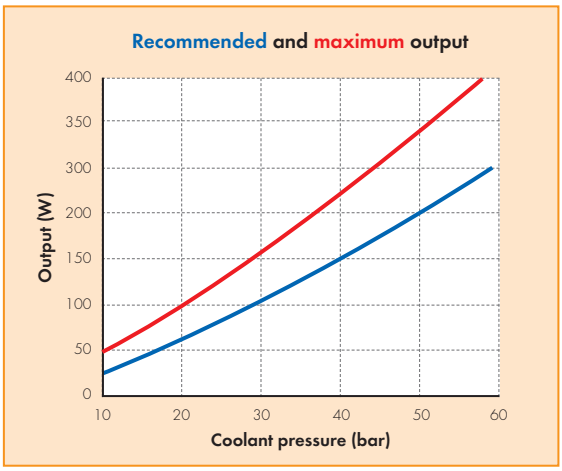
Press-fit measu ing adapter
• **Without** manometer

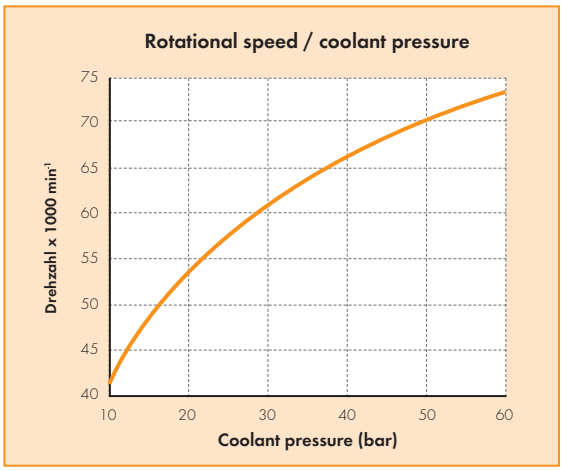
for tool holder	art.no.	€
Ø 25mm	**430300** 0025 4193	129,–

Manometer for press-fit measu ing adapter

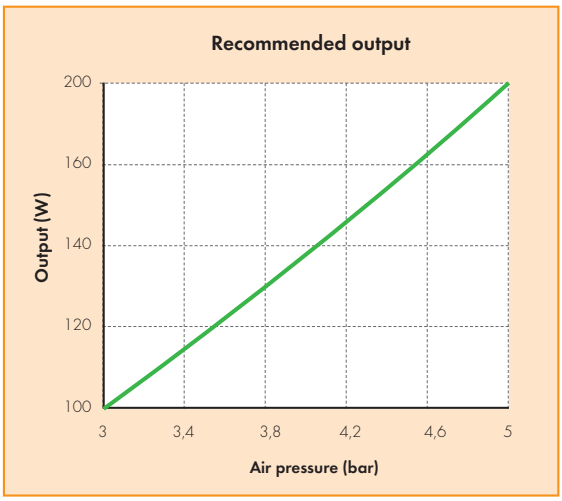
Ø mm	Connecting thread	art.no.	€
63	1/4"	**442150** 9905 4193	49,90

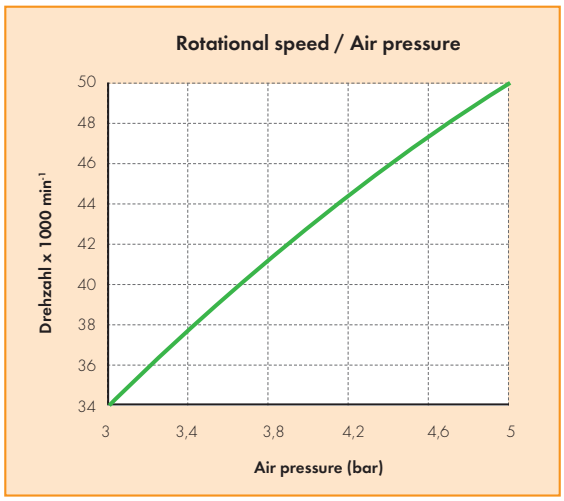
Performance diagram Toodle Blue





Performance diagram Toodle Green



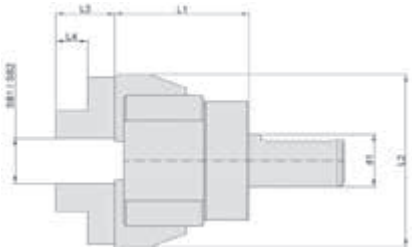


Toodle Blue Configurator

Calculate cutting data quickly and reliably online:
https://www.saratools.com/werkzeuge/konfigurator/

Bar gripper

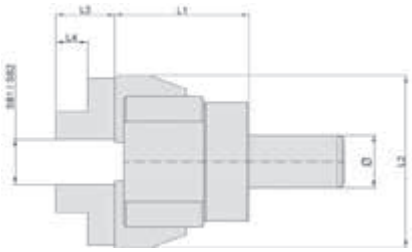
- Indexable jaws for several clamping ranges
- Wide clamping range
- Quick and easy setting
- Large range of clamping shanks



DIN 69880 (VDI)

Shank	Clamp width S1 mm	Clamp width S2 mm	L1 mm	L2 mm	L3 mm	L4 mm	art.no.	€
VDI 20	6 - 45	45 - 100	77	99	34	18	**461070** 0020	519,–
VDI 30	6 - 45	45 - 100	77	99	34	18	461070 0030	589,–
VDI 40	6 - 56	56 - 110	79	111	34	18	461070 0040	639,–
VDI 50	6 - 56	56 - 110	79	111	34	18	461070 0050	839,–

4136



With straight shank

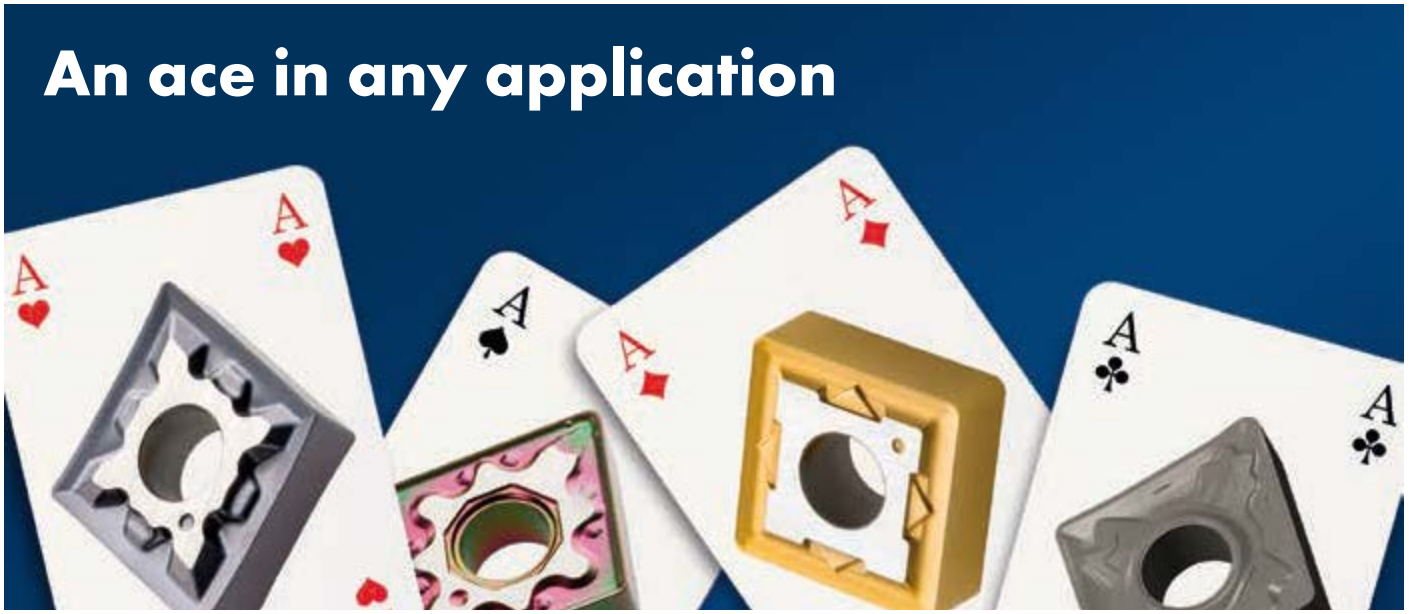
Shank	Clamp width S1 mm	Clamp width S2 mm	L1 mm	L2 mm	L3 mm	L4 mm	art.no.	€
Ø 20	6 - 45	45 - 100	77	99	34	18	**461071** 0020	609,–
Ø 25	6 - 45	45 - 100	77	99	34	18	461071 0025	609,–
Ø 32	6 - 45	45 - 100	77	99	34	18	461071 0032	609,–
Ø 40	6 - 56	56 - 110	79	111	34	18	461071 0040	679,–

4136

Indexable jaw set

for tool holder	art.no.	€
VDI and cylindrical shank	**461072** 0001	255,–

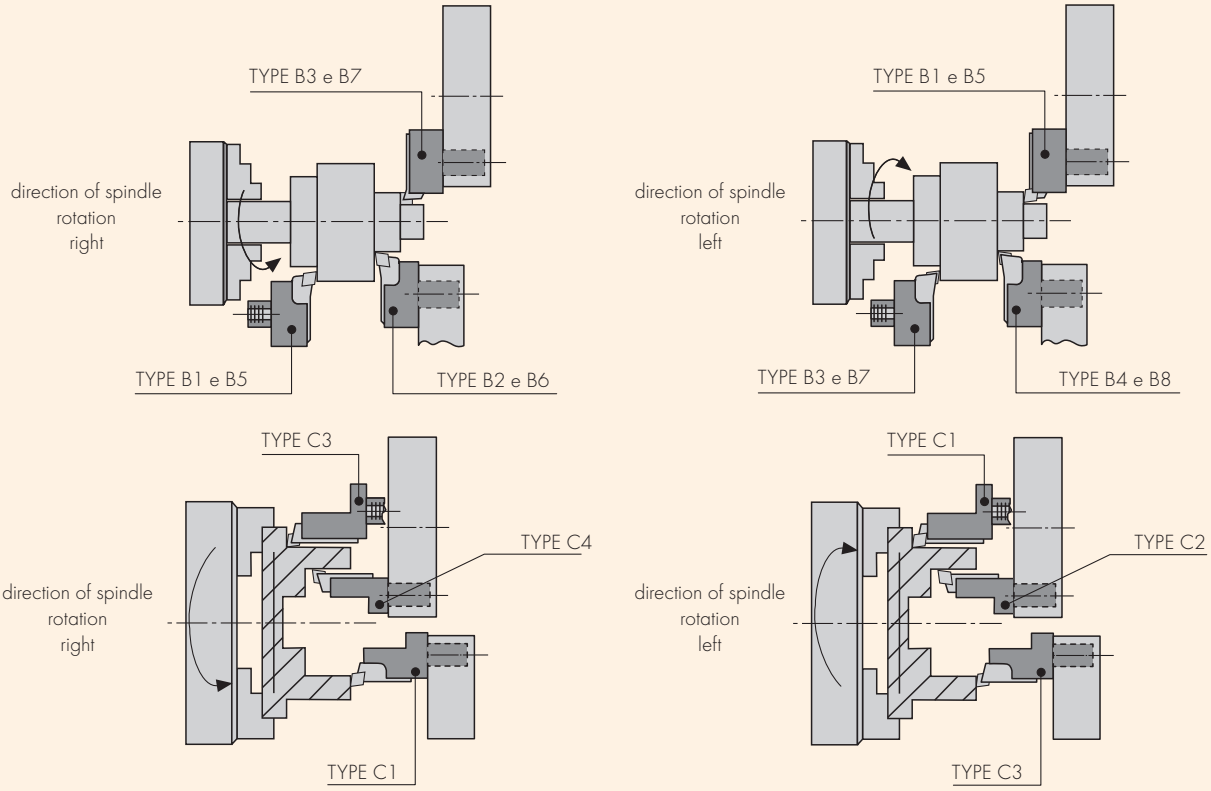
4136



Overview and possible uses of DIN 69880-compliant VDI tool holder

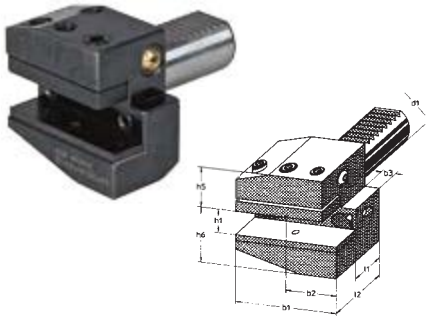
INFO

with straight shank
and internal coolant supply for NC lathes



SARA® Square transverse holding fixtu e

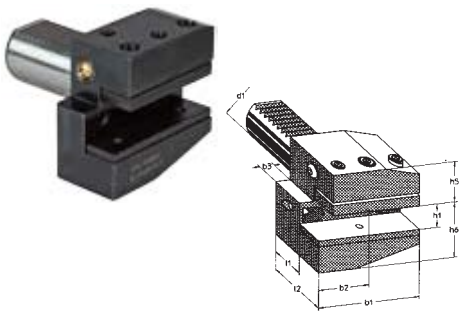
- Surface hardness 58 - 60 HRc
- Core strength HV 950 N/mm²
- Case depth 0.8 mm ± 0.2 mm
- Fully burnished and precision-ground



Type B1, right, short

Shank	d1 mm	b1 mm	b2 mm	h1 mm	b3 mm	h5 mm	h6 mm	l1 mm	l2 mm	art.no.	€
VDI 20	20	55	30	16	7	25	30	30	16	**446005** 0020	56,–
VDI 30	30	70	35	20	10	28	38	40	22	446005 0030	62,–
VDI 40	40	85	42.5	25	12.5	32.5	48	44	22	446005 0040	69,–
VDI 50	50	100	50	32	16	35	60	55	30	446005 0050	91,–

4134



Type B2, left, short

Shank	d1 mm	b1 mm	b2 mm	h1 mm	b3 mm	h5 mm	h6 mm	l1 mm	l2 mm	art.no.	€
VDI 20	20	55	30	16	7	25	30	30	16	**446007** 0020	56,–
VDI 30	30	70	35	20	10	28	38	40	22	446007 0030	62,–
VDI 40	40	85	42.5	25	12.5	32.5	48	44	22	446007 0040	69,–
VDI 50	50	100	50	32	16	35	60	55	30	446007 0050	91,–

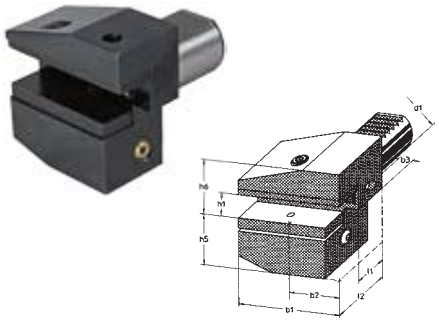
4134

Continued on next page >>>

Type B3, overhead right, short

Shank	d1 mm	b1 mm	b2 mm	h1 mm	b3 mm	h5 mm	h6 mm	l1 mm	l2 mm	art.no.	€
VDI 20	20	55	30	16	7	25	30	30	16	**446009** 0020	58,–
VDI 30	30	70	35	20	10	35	38	40	22	446009 0030	64,–
VDI 40	40	85	42.5	25	12.5	42.5	48	44	22	446009 0040	71,–
VDI 50	50	100	50	32	16	50	60	55	30	446009 0050	98,50

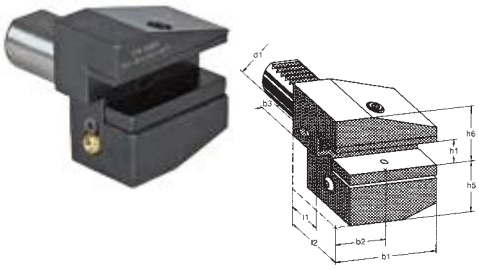
4134



Type B4, overhead left, short

Shank	d1 mm	b1 mm	b2 mm	h1 mm	b3 mm	h5 mm	h6 mm	l1 mm	l2 mm	art.no.	€
VDI 20	20	55	30	16	7	25	30	30	16	**446011** 0020	58,–
VDI 30	30	70	35	20	10	35	38	40	22	446011 0030	64,–
VDI 40	40	85	42.5	25	12.5	42.5	48	44	22	446011 0040	71,–
VDI 50	50	100	50	32	16	50	60	55	30	446011 0050	98,50

4134



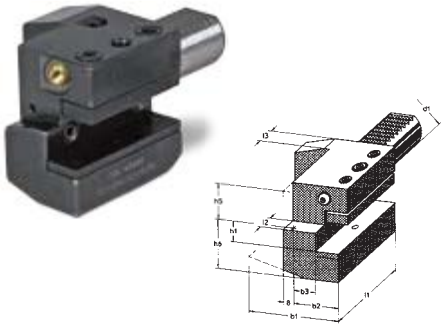
SARA® Square longitudinal holding fixtu e

- Surface hardness 58 - 60 HRc
- Core strength HV 950 N/mm²
- Case depth 0.8 mm ± 0.2 mm
- Fully burnished and precision-ground

Type C1, right

Shank	d1 mm	b1 mm	b2 mm	h1 mm	b3 mm	h5 mm	h6 mm	l1 mm	l2 mm	art.no.	€
VDI 20	20	52	27	16	13	25	30	7	50	**446021** 0020	69,–
VDI 30	30	70	35	20	17	28	38	10	70	446021 0030	69,–
VDI 40	40	85	42.5	25	21	32.5	48	12.5	85	446021 0040	82,–
VDI 50	50	100	50	32	26	35	60	16	100	446021 0050	105,–

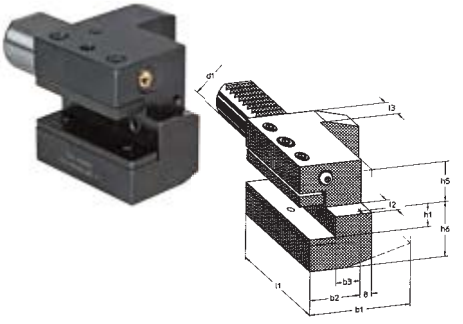
4134



Type C2, left

Shank	d1 mm	b1 mm	b2 mm	h1 mm	b3 mm	h5 mm	h6 mm	l1 mm	l2 mm	art.no.	€
VDI 20	20	65	40	16	26	25	30	7	50	**446023** 0020	69,–
VDI 30	30	76	41	20	23	28	38	10	70	446023 0030	69,–
VDI 40	40	90	47.5	25	25.5	32.5	48	12.5	85	446023 0040	82,–
VDI 50	50	105	55	32	30.5	35	60	16	100	446023 0050	105,–

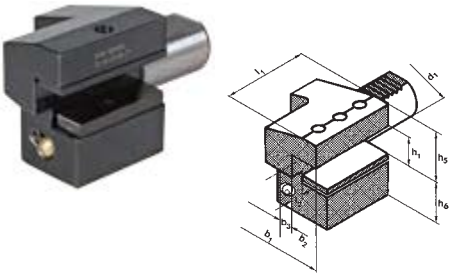
4134



Type C3, overhead right

Shank	d1 mm	b1 mm	b2 mm	h1 mm	b3 mm	h5 mm	h6 mm	l1 mm	l2 mm	art.no.	€
VDI 20	20	52	27	16	13	30	25	7	50	**446025** 0020	71,–
VDI 30	30	70	35	20	17	38	35	10	70	446025 0030	77,–
VDI 40	40	85	42.5	25	21	48	42.5	12.5	85	446025 0040	84,–
VDI 50	50	100	50	32	26	60	50	16	100	446025 0050	107,–

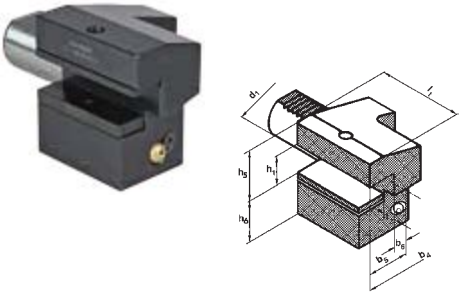
4134



Type C4, overhead left

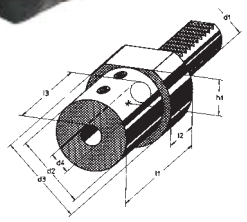
Shank	d1 mm	b4 mm	b5 mm	b6 mm	h1 mm	h5 mm	h6 mm	l1 mm	l2 mm	art.no.	€
VDI 20	20	65	40	26	16	30	25	7	50	**446027** 0020	71,–
VDI 30	30	76	41	23	20	38	35	10	70	446027 0030	77,–
VDI 40	40	90	47.5	25.5	25	48	42.5	12.5	85	446027 0040	84,–
VDI 50	50	105	55	30.5	32	60	50	16	100	446027 0050	107,–

4134



SARA® Tool holders for drilling tools

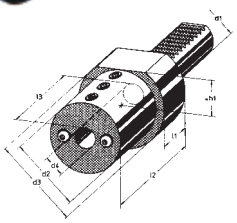
- Surface hardness 58 - 60 HRc
- Core strength HV 950 N/mm²
- Case depth 0.8 mm ± 0.2 mm
- Fully burnished and precision-ground



Type E1, for straight shank drilling tools with an internal coolant supply

Shank	d1 mm	d4 mm	d3 mm	h1 mm	l1 mm	l2 mm	d2 mm	l3 mm	art.no.	€
VDI 20	20	20	50	18	67	16	40	49	**446031** 2020	69,–
VDI 20	20	25	50	18	71	16	45	53	446031 2025	69,–
VDI 30	30	20	68	28	67	22	40	45	446031 3020	69,–
VDI 30	30	25	68	28	71	22	45	49	446031 3025	69,–
VDI 30	30	32	68	28	75	22	52	53	446031 3032	69,–
VDI 30	30	40	68	28	95	22	60	73	446031 3040	69,–
VDI 40	40	20	83	32.5	67	22	40	45	446031 4020	75,–
VDI 40	40	25	83	32.5	75	22	45	53	446031 4025	75,–
VDI 40	40	32	83	32.5	75	22	52	53	446031 4032	75,–
VDI 40	40	40	83	32.5	90	22	60	68	446031 4040	75,–
VDI 50	50	25	98	35	80	30	45	50	446031 5025	96,–
VDI 50	50	32	98	35	80	30	52	50	446031 5032	96,–
VDI 50	50	40	98	35	90	30	65	60	446031 5040	96,–
VDI 50	50	50	98	35	100	30	75	70	446031 5050	96,–

4134



Type E2, for straight shank turning tools with an internal and external coolant supply

Shank	d1 mm	d4 mm	d3 mm	h1 mm	l1 mm	l2 mm	d2 mm	l3 mm	art.no.	€
VDI 20	20	8	50	23	18	50	40	32	**446033** 2008	65,–
VDI 20	20	10	50	23	18	50	40	32	446033 2010	65,–
VDI 20	20	12	50	23	18	50	40	32	446033 2012	65,–
VDI 20	20	16	50	23	18	50	40	32	446033 2016	65,–
VDI 20	20	20	50	23	18	50	50	32	446033 2020	65,–
VDI 20	20	25	50	23	18	60	50	42	446033 2025	65,–
VDI 30	30	8	68	28	22	60	55	38	446033 3008	65,–
VDI 30	30	10	68	28	22	60	55	38	446033 3010	65,–
VDI 30	30	12	68	28	22	60	55	38	446033 3012	65,–
VDI 30	30	16	68	28	22	60	55	38	446033 3016	65,–
VDI 30	30	20	68	28	22	60	55	38	446033 3020	65,–
VDI 30	30	25	68	28	22	60	55	38	446033 3025	65,–
VDI 30	30	32	68	28	22	75	68	53	446033 3032	65,–
VDI 30	30	40	68	28	22	90	68	68	446033 3040	65,–
VDI 40	40	8	83	32.5	22	75	55	53	446033 4008	66,–
VDI 40	40	10	83	32.5	22	75	55	53	446033 4010	66,–
VDI 40	40	12	83	32.5	22	75	55	53	446033 4012	66,–
VDI 40	40	16	83	32.5	22	75	55	53	446033 4016	66,–
VDI 40	40	20	83	32.5	22	75	55	53	446033 4020	66,–
VDI 40	40	25	83	32.5	22	75	55	53	446033 4025	66,–
VDI 40	40	32	83	32.5	22	75	83	53	446033 4032	66,–
VDI 40	40	40	83	32.5	22	90	83	68	446033 4040	66,–
VDI 50	50	12	98	35	30	90	68	60	446033 5012	91,–
VDI 50	50	16	98	35	30	90	68	60	446033 5016	91,–
VDI 50	50	20	98	35	30	90	68	60	446033 5020	91,–
VDI 50	50	25	98	35	30	90	68	60	446033 5025	91,–
VDI 50	50	32	98	35	30	90	68	60	446033 5032	91,–
VDI 50	50	40	98	35	30	90	98	60	446033 5040	91,–
VDI 50	50	50	98	35	30	100	98	70	446033 5050	91,–

4134

SARA® Reducing bush for boring bar holders

d1 mm	d2 mm	d3 mm	F mm	K mm	X mm	Y mm	Illustration	art.no.	€
25	8	30	50	-	-	-	1	**446134** 2508	34,–
25	10	30	50	-	-	-	1	446134 2510	34,–
25	12	30	50	-	-	-	1	446134 2512	34,–
25	16	30	50	13	45.5	3.5	2	446134 2516	34,–
25	20	30	50	13	45.5	3.5	2	446134 2520	34,–
32	8	37	59	-	-	-	1	446134 3208	36,–
32	10	37	59	-	-	-	1	446134 3210	36,–
32	12	37	59	-	-	-	1	446134 3212	36,–
32	16	37	59	-	-	-	1	446134 3216	36,–
32	20	37	59	13	51	5	2	446134 3220	38,10
32	25	37	59	13	51	5	2	446134 3225	38,10
40	8	45	69	-	-	-	1	446134 4008	38,10
40	10	45	69	-	-	-	1	446134 4010	38,10
40	12	45	69	-	-	-	1	446134 4012	38,10
40	16	45	69	-	-	-	1	446134 4016	38,10
40	20	45	69	-	-	-	1	446134 4020	38,10
40	25	45	69	-	-	-	1	446134 4025	38,10
40	32	45	69	17	61	5	2	446134 4032	41,30

4194

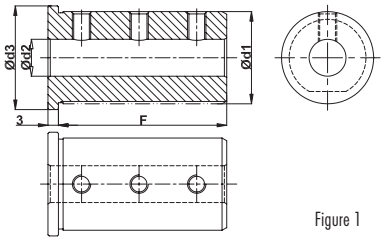


Figure 1

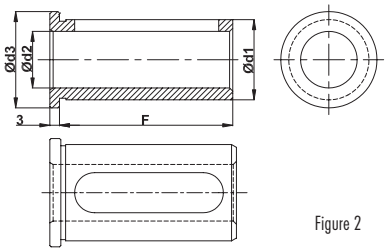


Figure 2

SARA® Morse taper holding fixtu e

- Surface hardness 58 - 60 HRc
- Core strength HV 950 N/mm²
- Case depth 0.8 mm ± 0.2 mm
- Fully burnished and precision-ground

Type F1, for tools with Morse tapers and tangs

Shank design interior	Shank	d1 mm	d3 mm	d4 mm	d2 mm	h1 mm	l1 mm	l2 mm	art.no.	€
MT 1	VDI 20	20	50	12.075	-	23	23	-	**446029** 0021	69,–
MT 1	VDI 30	30	68	12.07	-	28	27	-	446029 0031	69,–
MT 1	VDI 40	40	83	12.07	55	32.5	36	22	446029 0041	71,–
MT 2	VDI 20	20	50	17.78	40	23	90	30	446029 0022	67,–
MT 2	VDI 30	30	68	17.78	-	28	27	-	446029 0032	67,–
MT 2	VDI 40	40	83	17.78	55	32.5	36	22	446029 0042	69,–
MT 2	VDI 50	50	98	17.78	55	35	36	30	446029 0052	91,–
MT3	VDI 30	30	68	23.83	58	28	66	22	446029 0033	67,–
MT3	VDI 40	40	83	23.83	55	32.5	36	22	446029 0043	69,–
MT3	VDI 50	50	98	23.83	58	35	36	30	446029 0053	91,–
MT 4	VDI 40	40	83	31.27	68	32.5	80	22	446029 0044	69,–
MT 4	VDI 50	50	98	31.27	68	35	50	30	446029 0054	91,–

4134

SARA® Thread cutting quick-change chuck

- Automatically locks inserts in the chuck
- Flexible length compensation under compression and tension

Shank	d mm	D mm	L mm	Length compensation, pressure mm	Length compensation, tension mm	Thread	art.no.	€
VDI 30	19	38	55	7	7	M 3 - M 14	**442009** 3012	239,–
VDI 30	31	54	77	12	12	M 5 - M 22	442009 3024	265,–
VDI 40	19	38	55	7	7	M 3 - M 14	442009 4012	230,–
VDI 40	31	54	77	12	12	M 5 - M 22	442009 4024	265,–

4134

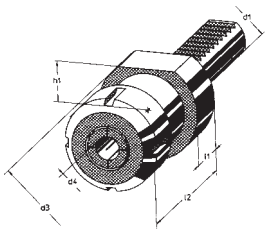
SARA® Collet holder for DIN 6499 collets (ER)

- Surface hardness 58 - 60 HRc
- Core strength HV 950 N/mm²
- Case depth 0.8 mm ± 0.2 mm
- Fully burnished and precision-ground
- Additional versions available on request
- When selecting collets, type B is preferable.

Type E4, straight holding fixtu e with collet

Shank	Designation	Clamping range mm	d1 mm	h1 mm	l2 mm	l1 mm	d3 mm	art.no.	€
VDI 20	ER16 426E	1 - 10	20	23	40	16	50	**446036** 2016	83,–
VDI 20	ER25 430E	2 - 16	20	23	50	16	50	446036 2025	83,–
VDI 20	ER32 470E	2 - 20	20	23	50	16	50	446036 2032	83,–
VDI 30	ER25 430E	2 - 16	30	28	57	22	68	446036 3025	85,50
VDI 30	ER32 470E	2 - 20	30	28	62	22	68	446036 3032	85,50
VDI 30	ER40 472E	3 - 26	30	28	75	22	68	446036 3040	85,50
VDI 40	ER25 430E	2 - 16	40	32.5	75	22	83	446036 4025	85,50
VDI 40	ER32 470E	2 - 20	40	32.5	62	22	83	446036 4032	85,50
VDI 40	ER40 472E	3 - 26	40	32.5	75	22	83	446036 4040	85,50
VDI 50	ER40 472E	3 - 26	50	35	75	30	98	446036 5040	124,–

4134



SARA® Hydraulic clamping system HYDRO-FIX

powered by ETP

NEU · NEW · NUOVO · NY · NOUVEAU · NUEVO

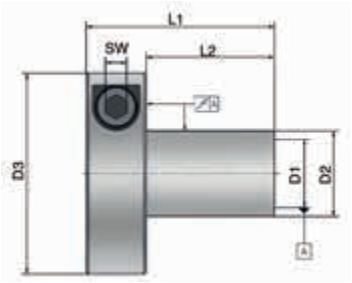
Hydraulic clamping system for boring bars and powered tools

The system is attached and clamped with just one screw. The clamp engages evenly with the workpiece and this increases the tool service life. The hydraulic clamping system absorbs and reduces vibrations, and thus increases the surface quality.

The equal and complete clamping of the shank significant y reduces the vibration amplitude.

HYDRO-FIX clamps simultaneously in both directions, the tool and in the tool holder.

- Reduced vibrations
- Increased cutting speeds and/or feed rates
- Improved surface quality
- Increased tool life
- Quick and easy to handle
- Recommended shank tolerance h7
- Recommended bore tolerance H7



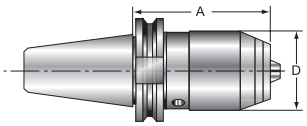
For boring bars

D1 mm	D2 mm	D3 mm	L1 mm	L2 mm	Wr. width mm	art.no.	€
12	16	43.5	38	24	5	**433805** 1216	369,–
16	20	47	44	30	5	433805 1620	369,–
20	25	52	44	30	5	433805 2025	369,–
25	32	59	48	34	5	433805 2532	395,–
32	40	69.5	53	39	5	433805 3240	421,–

4130

ATORN® Precision drill chuck with worm gear

- **Clamping by means of an integrated worm gear**
- **Suitable for clockwise and anti-clockwise rotation**
- Clamping range 1.0 to 16.0 mm
- Minimum span length 22 mm at a diameter of 1.0 mm
- Long service life, wearing parts hardened and ground
- Supplied with hexagonal key



DIN 69880 (VDI)

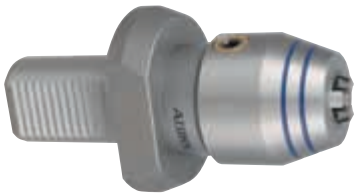
- Internal coolant supply

Shank	Clamping range mm	A mm	D mm	Tightening torque max. N-m	Retention force N	Wr. width mm	True running accuracy mm	art.no.	€
VDI 30	1 - 16	87	50	10	90	4	0.03	**441015** 3016	330,–
VDI 40	1 - 16	87	50	10	90	4	0.03	441015 4016	355,–

4101

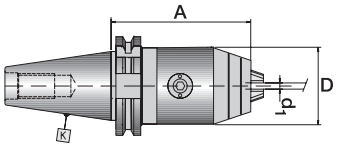
ATORN® Precision drill chuck with spur gear system

- **Clamping via spur gear system**
- **Suitable for clockwise and anti-clockwise rotation**
- Short clamping and retrofitting time
- Very short design
- For CNC lathes, for drilling, reaming, countersinking, thread cutting



VDI tool holding fixtu e, DIN 69880

- Central coolant supply



Shank	Clamping range mm	A mm	D mm	Tightening torque max. N-m	Retention force N	Wr. width mm	True running accuracy mm	art.no.	€
VDI 30	0.5 - 16	95	57	20	90	6	0.02	**440138** 3016	335,–
VDI 40	0.5 - 16	95	57	20	90	6	0.02	440138 4016	375,–

4101

Threading die holder Synchro

- **For threading dies**
- Synchronised thread cutting with threading dies on CNC machines
- Cooling lubricant discharged through the threading die (IC) = optimum lubrication
- Supplied without threading die

Base holders with interchangeable inserts

VDI base holder

- For holding interchangeable threading die inserts

Shank	art.no.	€
VDI 20	**442014** 0020	131,–
VDI 30	442014 0030	131,–
VDI 40	442014 0040	131,–

4135

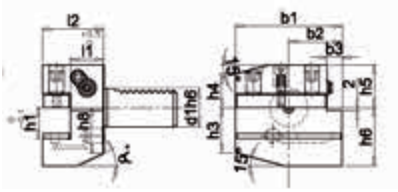
Threading die interchangeable inserts

- For VDI base holders

suitable for threading die	External Ø mm	Working length mm	art.no.	€
M1 - M2.5 / Ø16	26	74	**442015** 0102	76,–
M3 - M4 / Ø20	30	74	442015 0304	76,–
M5 - M6 / Ø20	30	74	442015 0506	76,–
M7 - M9 / Ø25	35	74	442015 0709	76,–
M10 / Ø30	40	74	442015 0010	82,–
M12 - M14 / Ø38	48	74	442015 1214	84,–
M16 - M20 / Ø45	55	84	442015 1620	84,–

4135

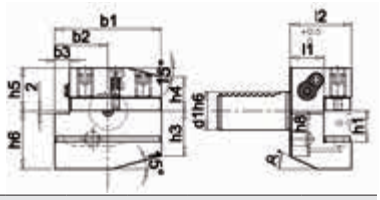
SARA® Square radial holding fixtu e with internal coolant supply



Form B1, right-hand, short version

Shank	b1 mm	b2 mm	b3 mm	l1 mm	l2 mm	h1 mm	h3 mm	h4 mm	h5 mm	h6 mm	h8 mm	art.no.	€
VDI 20	70	35	10	22	40	16	29.5	22	31.5	38.5	30	**446105** 0020	92,50
VDI 30	70	35	10	22	40	20	26	22	28	38	30	446105 0030	92,50
VDI 40	85	42.5	12.5	22	44	25	35	30	32.5	48		446105 0040	105,–
VDI 50	85	42.5	12.5	22	44	25	35	30	32.5	48		446105 0050	160,–

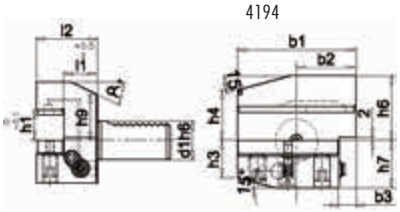
4194



Form B2, left-hand, short version

Shank	b1 mm	b2 mm	b3 mm	l1 mm	l2 mm	h1 mm	h3 mm	h4 mm	h5 mm	h6 mm	h8 mm	art.no.	€
VDI 20	70	35	10	22	40	16	29.5	22	31.5	38.5	30	**446107** 0020	100,–
VDI 30	70	35	10	22	40	20	26	22	28	38	30	446107 0030	105,–
VDI 40	85	42.5	12.5	22	44	25	35	30	32.5	48		446107 0040	109,–
VDI 50	85	42.5	12.5	22	44	25	35	30	32.5	48		446107 0050	160,–

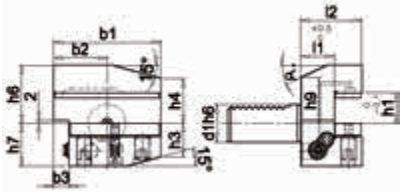
4194



Form B3, overhead right-hand, short version

Shank	b1 mm	b2 mm	b3 mm	l1 mm	l2 mm	h1 mm	h3 mm	h4 mm	h6 mm	h7 mm	h9 mm	art.no.	€
VDI 20	70	35	10	22	40	16	29.5	22	38.5	35	28	**446109** 0020	92,50
VDI 30	70	35	10	22	40	20	26	22	38	35	28	446109 0030	92,50
VDI 40	85	42.5	12.5	22	44	25	35	30	48	42.5		446109 0040	105,–
VDI 50	85	42.5	12.5	22	44	25	35	30	48	42.5		446109 0050	160,–

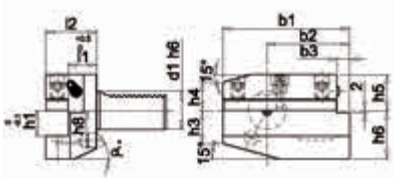
4194



Form B4, overhead left-hand, short version

Shank	b1 mm	b2 mm	b3 mm	l1 mm	l2 mm	h1 mm	h3 mm	h4 mm	h6 mm	h7 mm	h9 mm	art.no.	€
VDI 20	70	35	10	22	40	16	29.5	22	38.5	35	28	**446111** 0020	100,–
VDI 30	70	35	10	22	40	20	26	22	38	35	28	446111 0030	105,–
VDI 40	85	42.5	12.5	22	44	25	35	30	48	42.5		446111 0040	109,–
VDI 50	85	42.5	12.5	22	44	25	35	30	48	42.5		446111 0050	160,–

4194

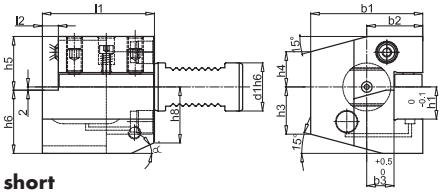


Form B5, right-hand, long version

Shank	b1 mm	b2 mm	b3 mm	l1 mm	l2 mm	h1 mm	h3 mm	h4 mm	h5 mm	h6 mm	art.no.	€
VDI 30	118	75.5	12.5	22	44	25	35	30	32.5	48	**446112** 0030	164,–
VDI 40	130	80	16	30	55	32	42	35	35	60	446112 0040	196,–
VDI 50	145	82.5	16	30	60	32	46	42.5	42.5	62.5	446112 0050	285,–

4194

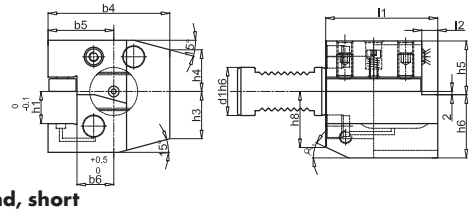
SARA® Square axial holding fixtu e, double toothed with internal coolant supply



Form C1, right-hand and C4 overhead left-hand, short

Shank	b1 mm	b2 mm	b3 mm	l1 mm	l2 mm	h1 mm	h3 mm	h4 mm	h5 mm	h6 mm	h8 mm	art.no.	€
VDI 20	58	33	15	55	7	20	26	28	30	36	26	**446221** 0020	164,–
VDI 30	70	35	17	70	10	20	26	22	32	38	30	446221 0030	175,–
VDI 40	85	42.5	21	85	12.5	25	35	30	38	48	40	446221 0040	196,–
VDI 50	90.5	48	26	85	12.5	25	42	35	44	48		446221 0050	250,–

4194

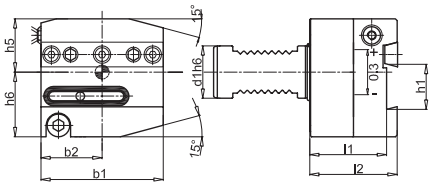


Form C2 left-hand and C3 overhead right-hand, short

Shank	b4 mm	b5 mm	b6 mm	l1 mm	l2 mm	h1 mm	h3 mm	h4 mm	h5 mm	h6 mm	h8 mm	art.no.	€
VDI 20	62	37	19	55	7	20	38	28	30	36	26	**446223** 0020	164,–
VDI 30	76	41	23	70	10	20	26	26	32	38	30	446223 0030	175,–
VDI 40	90	47.5	25.5	85	12.5	25	35	30	38	48	40	446223 0040	196,–
VDI 50	95	52.5	30.5	85	12.5	25	42	37	44	48		446223 0050	250,–

4194

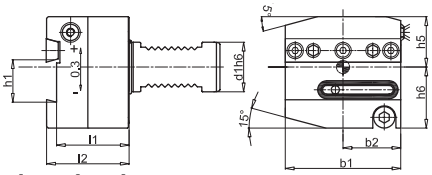
SARA® Cutting tool holder double toothed with internal coolant supply



Cutting tool holder AL left-hand and ARU right-hand overhead

Shank	l1 mm	l2 mm	b1 mm	b2 mm	h1 mm	h5 mm	h6 mm	art.no.	€
VDI 30	44	50	70	35	26	32	37	**446310** 3026	350,–
VDI 30	44	50	85	42.5	32	32	40	446310 3032	395,–
VDI 40	44	50	85	42.5	26	43	40	446310 4026	395,–
VDI 40	44	50	85	42.5	32	43	40	446310 4032	395,–
VDI 50	44	50	100	50	32	43	45	446310 5032	415,–

4194



Cutting tool holder AR right-hand and ALU left-hand overhead

Shank	l1 mm	l2 mm	b1 mm	b2 mm	h1 mm	h5 mm	h6 mm	art.no.	€
VDI 30	44	50	70	35	26	32	37	**446311** 3026	350,–
VDI 30	44	50	85	42.5	32	32	40	446311 3032	395,–
VDI 40	44	50	85	42.5	26	43	40	446311 4026	395,–
VDI 40	44	50	85	42.5	32	43	40	446311 4032	395,–
VDI 50	44	50	100	50	32	43	45	446311 5032	415,–

4194

Seal for cutting tool holder with internal coolant supply

Description	art.no.	€
For cutting tool holder 446310 and 446311	**446314** 2632	6,20

4194

SARA® Accessories for VDI holding fixtu es with internal coolant supply

Coolant hose set

- Up to 150 bar coolant pressure

Description	Length mm	art.no.	€
Coolant hose with adapter G1/8 inch-M12 x 1.5	200	**446312** 0200	30,–
Coolant hose with adapter G1/8 inch-M12 x 1.5	300	446312 0300	34,20

4194

Spacer

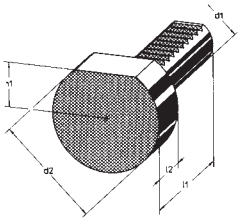
- Allows reduction to the next-smallest indexable insert holder without wearing the nut
- Ground version
- Metallic sealing

L mm	B mm	D mm	art.no.	€
69	17	4	**446313** 0030	15,50
84	21	5	446313 0040	16,50

4194

SARA® Protective plugs

Type Z2, steel



Shank	Design	d1 mm	d2 mm	h1 mm	l1 mm	l2 mm	Steel art.no.	€
VDI 20	With additional underside surface area	20	50	23	56	16	**446039** 0020	21,60
VDI 30	With additional underside surface area	30	68	28	75	20	446039 0030	21,60
VDI 40	Standard	40	83	32.5	83	20	446039 0040	24,90
VDI 50	Standard	50	98	35	98	20	446039 0050	31,40

4134

Type Z2, plastic

Shank	d1 mm	d2 mm	h1 mm	l1 mm	l2 mm	Plastic art.no.	€
VDI 20	20	50	23	56	16	**446040** 2055	10,80
VDI 30	30	68	28	75	20	446040 3080	13,–
VDI 40	40	83	32.5	83	20	446040 4085	13,–
VDI 50	50	98	35	98	20	446040 5085	26,–

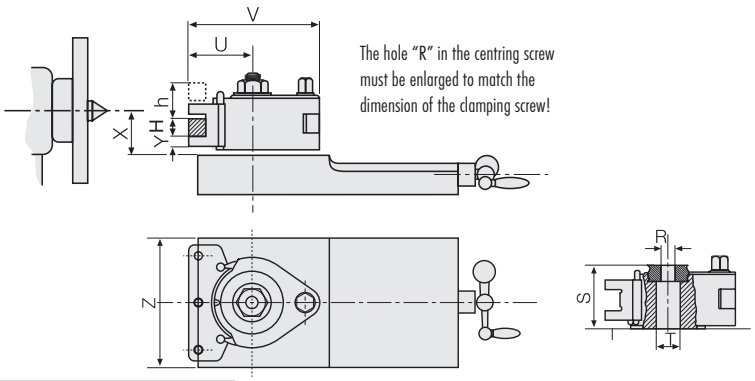
4134

... without shrinkage

ATORN®
High quality for great performance

ATORN® Quick-change tool holders

- Profile- round, toothed central body attached to the lathe support along with the base body
- The base body can accommodate an unlimited number of interchangeable holders for turning or drilling tools, one after the other.
- 40 diffe ent steel holder angle settings possible
- Repeatability ± 0.01 mm



The hole "R" in the centring screw must be enlarged to match the dimension of the clamping screw!

Technical data												
		Aa	A		B		C			D1		
Change-holder size	D	12	16	20	25	32	32	40	45	40	50	63
Drive power max.	kW	1.1	2.2	2.2	6.6	6.6	13.2	13.2	13.2	22	22	22
Slide width max.	Z mm	80	100	100	150	150	180	180	180	200	200	200
Height adjustability	mm	10	14	14	22	14	40	36	32	38	28	24
Steel support	Y mm	6.2	10	10	12	13.5	15	16.5	16.5	20	20	20
Height of the mild steel max.	H mm	12	16	20	25	32	32	40	45	40	50	63
Overall width max.	V mm	70	100	100	150	150	192	202	202	230	234	242
Total height max.	S mm	37	54	54	75	75	105	105	105	122	122	122
Projection max	U mm	30	48	48	71	71	92	102	102	112	116	124
Bore Ø max.	T mm	12	35	35	40	40	55	55	55	65	65	65

Minimum level required X for steel holder D											
	Aa	A		B		C			D1		
Change-holder size D	12	16	20	25	32	32	40	45	40	50	63
Steel holder H mm	X min. mm										
6	12										
8	14	17									
10	16	19	19								
12	18	21	21	24	25						
(14)		23	23	26	27	29					
16		25	25	28	29	31	31	31			
20				32	33	35	35	35			
25				37	38	40	40	40	45		
(30)					45	45	45	45	50	51	52
32						47	47	47	52	52	52
40							55	55	60	60	60
45								60		65	65
50										70	70
63											83

Quick-release tool holder head with eccentric clamp

- Supplied with eccentric lever and square key for the holder
- Additional versions with diffe ent bores available on request

Holder size									art.no.	€
AA - D12	A1	B1	C1	D1	E1				**446501** 0012	250,–
A - D16/20	A2	B2	C2	D2	E2	F1	G1	H1	446501 1116	307,–
B - D25/32	A3	B3	C3	D3	E3	F2	G2	H2	446501 2225	453,–
C - D32/40/45	A4	B4	C4	D4	E4	F3	G3	H3	446501 3332	699,–
D1 - D40/50/63	A5	B5	C5	D5	E5	F4	G4	H4	446501 4440	1.239,–
									4137	

Spare parts

Eccentric bolts		
	art.no.	€
A1	446550 0012	50,–
A2	446550 1116	45,–
A3	446550 2225	69,–
A4	446550 3332	76,–
A5	446550 4440	93,50
	4137	

Protective cover with scale		
	art.no.	€
B1	446551 0012	42,50
B2	446551 1116	22,90
B3	446551 2225	30,50
B4	446551 3332	40,90
B5	446551 4440	112,–
	4137	

Centring disc		
	art.no.	€
C1	446552 0012	13,55
C2	446552 1116	12,70
C3	446552 2225	13,55
C4	446552 3332	22,90
C5	446552 4440	33,20
	4137	

Eccentric wrench		
	art.no.	€
D1	446553 0012	48,50
D2	446553 1116	53,80
D3	446553 2225	65,20
D4	446553 3332	65,20
D5	446553 4440	97,50
	4137	

Retaining strap with eccentric bolt		
	art.no.	€
E1	446560 0012	165,–
E2	446560 1116	233,–
E3	446560 2225	350,–
E4	446560 3332	510,–
E5	446560 4440	949,–
	4137	

Plunger		
	art.no.	€
F1	446562 1116	4,62
F2	446562 2225	4,62
F3	446562 3332	4,83
F4	446562 4440	6,15
	4137	

Plunger spring		
	art.no.	€
G1	446563 1116	1,39
G2	446563 2225	1,74
G3	446563 3332	1,74
G4	446563 4440	3,70
	4137	

Pointer		
	art.no.	€
H1	446565 1116	10,35
H2	446565 2225	10,65
H3	446565 3332	13,95
H4	446565 4440	25,10
	4137	

Quick-release boring tool holder type B

- With V-block
- For boring bars and other straight shank tools
- Supplied with lockable height-adjustment screw and clamping screws

suitable for holder size	for boring bar Ø mm	Total length mm	suitable quadratic-head bolt	art.no.	€
AA	12	50	M5 x 0.8 x 18	**446510** 0012	88,50
A	20	85	M7 x 1 x 23	446510 1120	88,50
B	32	130	M11 x 1 x 30	446510 2230	145,–
C	40	160	M14 x 1.5 x 40	446510 3340	249,–
C	50	160	M14 x 1.5 x 40	446510 3350	265,–
D1	63	180	M14 x 1.5 x 40	446510 4463	569,–

4137

Quick-release lathe tool holder, type D

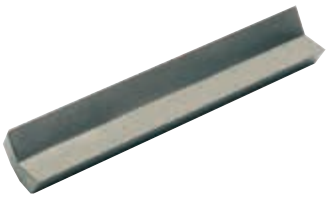
- Flat tool support
- Supplied with lockable height-adjustment screw and clamping screws

suitable for holder size	D mm	Total length mm	suitable quadratic-head bolt	art.no.	€
AA	12	50	M5 x 0.8 x 18	**446505** 0012	83,50
A	16	75	M7 x 1 x 23	446505 1116	83,50
A	16	90	M7 x 1 x 23	446505 1117	83,50
A	20	75	M7 x 1 x 23	446505 1120	85,–
A	20	90	M7 x 1 x 23	446505 1121	85,–
B	25	120	M11 x 1 x 30	446505 2225	130,–
B	25	140	M11 x 1 x 30	446505 2226	130,–
B	32	120	M11 x 1 x 30	446505 2232	133,–
B	32	140	M11 x 1 x 30	446505 2233	133,–
C	32	150	M14 x 1.5 x 40	446505 3332	205,–
C	32	170	M14 x 1.5 x 40	446505 3333	205,–
C	40	150	M14 x 1.5 x 40	446505 3340	224,–
C	40	170	M14 x 1.5 x 40	446505 3341	224,–
C	45	170	M14 x 1.5 x 40	446505 3345	232,–
D1	40	180	M14 x 1.5 x 40	446505 4440	340,–
D1	50	180	M14 x 1.5 x 40	446505 4450	360,–
D1	63	180	M14 x 1.5 x 40	446505 4463	385,–

4137

Insert V-blocks, type P

- For holding small boring bars and boring tools in quick-release boring tool holder B

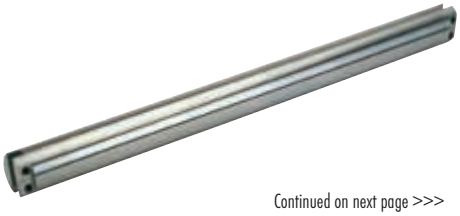


suitable for holder size	Total length mm	max. Ø mm	art.no.	€
A	85	14	**446515** 1114	19,95
B	130	20	446515 2220	20,40
C	160	25	446515 3325	36,90
C	160	32	446515 3332	44,50
D1	180	40	446515 4440	81,–

4137

Boring bar

- For quick-release holders with straight bores
- Lateral slot, one side straight and one side inclined



suitable for holder size	Ø mm	for quadratic mm	Total length mm	art.no.	€
A	30	12x12	250	**446545** 1112	57,50
B	40	12x12	500	446545 2212	73,90
C	40	12x12	500	446545 3312	73,90
C	50	20x20	500	446545 3320	134,–
D1	63	20x20	600	446545 4420	210,–

4137

Continued on next page >>>

Quick-release boring bar holder, type BS

- With cylindrical bore for Morse taper sleeves and for direct attachment of boring bars
- Supplied with lockable height-adjustment screw and clamping screws
- Tool holder blanks available on request

suitable for holder size	for boring bar Ø mm	Total length mm	art.no.	€
AA	15	50	**446520** 0015	102,–
A	30	80	446520 1130	121,50
B	40	120	446520 2240	184,50
C	40	160	446520 3340	308,–
C	50	160	446520 3350	312,–
			4137	

Morse taper sleeve, type H

- With jacking screw
- For mounting in BS quick-release boring bar holders, straight outer diameter
- For tools with a Morse taper shank

suitable for holder size	Shank Ø mm	Shank design interior	art.no.	€
A	30	MT 1	**446525** 1101	42,70
A	30	MT 2	446525 1102	45,20
B	40	MT3	446525 2203	55,–
B	40	MT 4	446525 2204	61,80
C	40	MT3	446525 3303	55,–
C	40	MT 4	446525 3304	61,80
C	50	MT3	446525 3313	70,–
C	50	MT 4	446525 3314	74,–
C	50	MT 5	446525 3315	100,–
D1	63	MT 5	446525 4405	144,–
			4137	

Quick-release parting-off ool holder, type AS

- For parting-off tool ype TS

suitable for holder size	suitable for	art.no.	€
AA	Parting-off ool TS, 2.5 x 10.0	**446540** 0001	140,–
A	Parting-off ool TS, 2.7 x 10.0	446540 1180	142,–
B	Parting-off ool TS, 4.2 x 15.9	446540 2200	179,–
C	Parting-off ool TS, 5.1 x 18.5	446540 3300	215,–
		4137	

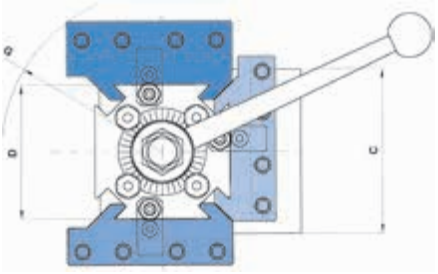
... and stable.

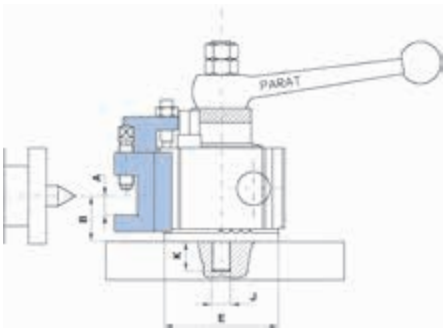
ATORN®
Performance demands quality

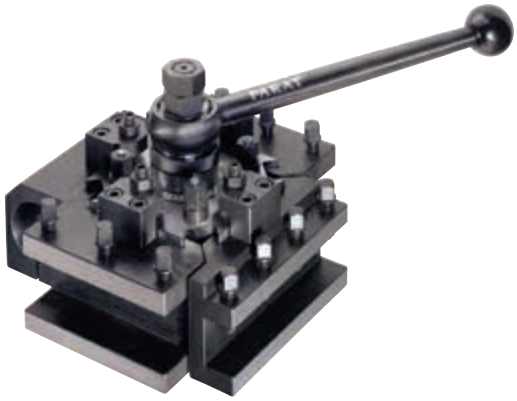
Quick-change tool holder

- For lathes
- Precise manufacture due to high precision and indexing accuracy (0.005 mm)
- Various production options (40 tool positions, 9° spacing possible)
- Quick height adjustment via adjusting screw
- Extremely fl xible due to modular design
- Selecting the correct revolver head depends on the following parameters: lathe drive power, tool slide width C, turning tool height A

Assembly service on request







4-place revolver head

- Supplied with cranked box spanner and chuck key

Type	A mm	B mm	C mm	D mm	E mm	G mm	J mm	K mm	Drive power max. kW	Weight per unit kg	art.no.	€
RD1	20	30	90 - 100	84	80	180	M14 x 2	21	6	3	**446601** 0101	1.459,–
RD2	25	40	110 - 150	106	102	240	M16 x 2	25	15	6.5	446601 0201	1.859,–
RD3	40	60	150 - 180	134	133	300	M20 x 2.5	30	25	14	446601 0301	2.699,–
RD4	50	80	200 - 250	154	150	350	M24 x 3	35	45	21	446601 0401	3.549,–

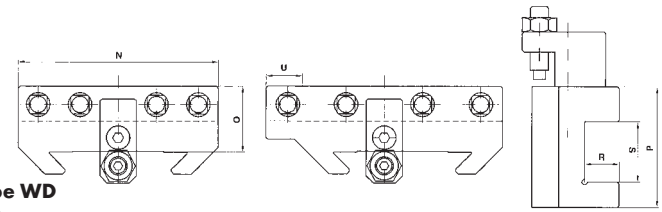
4136

4-place revolver head with internal cooling

- Supplied with cranked box spanner, socket spanner, chuck key, clamping screw with internal bore, cooling hose, connecting piece, winding piece, locking screw

Type	A mm	B mm	C mm	D mm	E mm	G mm	J mm	K mm	Drive power max. kW	Weight per unit kg	art.no.	€
RD1+IC	20	30	90 - 100	84	80	180	M14 x 2	21	6	3	**446601** 0102	1.679,–
RD2+IC	25	40	110 - 150	106	102	240	M16 x 2	25	15	6.5	446601 0202	2.069,–
RD3+IC	40	60	150 - 180	134	133	300	M20 x 2.5	30	25	14	446601 0302	2.789,–
RD4+IC	50	80	200 - 250	154	150	350	M24 x 3	35	45	21	446601 0402	3.699,–

4136



Quick-release holder, type WD

- Internal and external machining

Type	suitable for	N mm	O mm	P mm	R mm	S mm	U mm	Weight kg	art.no.	€
WD 1/12	RD1/RD1+IK/UD1	84	24	47	14	22	-	0.7	**446605** 0112	126,–
WD 1/20	RD1/RD1+IK/UD1	84	33	52	20	22	-	0.8	446605 0120	147,50
WD 2/25	RD2/RD2+IK/UD2	110	36	66	19	33	-	1.9	446605 0225	190,–
WD 3/32	RD3/RD3+IK/UD3	140	44	76	25	33	-	3	446605 0332	296,–
WD 3/40	RD3/RD3+IK/UD3	140	44	76	25	33	-	3.1	446605 0340	296,–
WD 4/40	RD4/RD4+IC	160	53	96	30	44	-	5	446605 0440	453,–
WD 4/50	RD4/RD4+IC	160	63	96	40	54	-	5.5	446605 0450	453,–

4136

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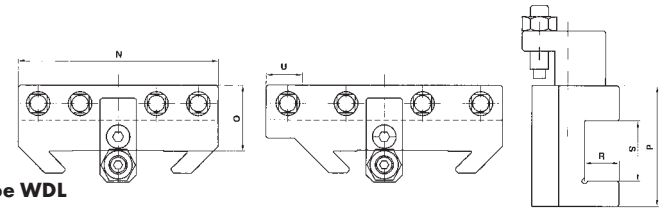


Quick-release holder, type WDL

• Internal machining

Type	suitable for	N mm	O mm	P mm	R mm	S mm	U mm	Weight kg	art.no.	€
WDL 1/12	RD1/RD1+IK/UD1	100	24	47	14	22	16	0.8	**446635** 0112	134,50
WDL 1/20	RD1/RD1+IK/UD1	100	33	52	20	22	16	0.9	446635 0120	158,–
WDL 2/25	RD2/RD2+IK/UD2	130	36	66	19	33	20	2.1	446635 0225	199,–
WDL 3/32	RD3/RD3+IK/UD3	165	44	76	25	33	25	3.4	446635 0332	307,–
WDL 3/40	RD3/RD3+IK/UD3	165	44	76	25	43	25	3.4	446635 0340	307,–
WDL 4/40	RD4/RD4+IC	190	53	96	30	44	30	5.8	446635 0440	502,–
WDL 4/50	RD4/RD4+IC	190	63	96	40	54	30	6	446635 0450	502,–

4136

Quick-release holder, type WDPL

• For boring bars

Type	suitable for	N mm	O mm	P mm	R mm	S mm	U mm	Weight kg	art.no.	€
WDPL 1/12	RD1/RD1+IK/UD1	100	289	47	16	22	16	0.9	**446610** 0112	147,50
WDPL 2/25	RD2/RD2+IK/UD2	130	50	62	31	33	20	2.3	446610 0225	243,–
WDPL 3/32	RD3/RD3+IK/UD3	165	53	66	31	33	25	3.6	446610 0332	349,–
WDPL 4/40	RD4/RD4+IC	190	63	96	40	52	30	6.5	446610 0440	645,–

4136

Quick-release holder, type WB

• For clamping sleeves

Type	suitable for	N mm	O mm	P mm	R mm	S mm	U mm	Weight kg	art.no.	€
WB 1/30	RD1/RD1+IK/UD1	84	39	47	30	-	-	0.8	**446620** 0130	147,50
WB 2/40	RD2/RD2+IK/UD2	110	51	62	40	-	-	1.8	446620 0240	243,–
WB 3/40	RD3/RD3+IK/UD3	140	53	66	40	-	-	2.7	446620 0340	349,–
WB 3/50	RD3/RD3+IK/UD3	140	63	76	50	-	-	3.5	446620 0350	382,–
WB 4/60	RD4/RD4+IC	160	77	96	60	-	-	6	446620 0460	645,–

4136

Clamping sleeves, Morse taper

suitable for	External Ø mm	Shank design interior	art.no.	€
WB 1/30	30	MT 1	**446625** 0101	92,50
WB 1/30	30	MT 2	446625 0102	102,50
WB 2/40, WB 3/40	40	MT3	446625 0203	117,50
WB 2/40, WB 3/40	40	MT 4	446625 0204	121,–
WB 3/50	50	MT3	446625 0303	131,–
WB 3/50	50	MT 4	446625 0304	139,–
WB 4/60	60	MT 4	446625 0404	193,50
WB 4/60	60	MT 5	446625 0405	201,50

4136

Clamping sleeves, straight, slotted

suitable for	External Ø mm	Interior Ø mm	art.no.	€
WB 1/30	30	8	**446626** 0108	54,–
WB 1/30	30	10	446626 0110	54,–
WB 1/30	30	12	446626 0112	54,–
WB 1/30	30	15	446626 0115	54,–
WB 1/30	30	16	446626 0116	54,–
WB 1/30	30	20	446626 0120	54,–
WB 1/30	30	25	446626 0125	54,–
WB 2/40, WB 3/40	40	10	446626 0210	58,–
WB 2/40, WB 3/40	40	12	446626 0212	58,–
WB 2/40, WB 3/40	40	15	446626 0215	58,–
WB 2/40, WB 3/40	40	16	446626 0216	58,–

4136

suitable for	External Ø mm	Interior Ø mm	art.no.	€
WB 2/40, WB 3/40	40	20	446626 0220	58,–
WB 2/40, WB 3/40	40	25	446626 0225	58,–
WB 2/40, WB 3/40	40	32	446626 0232	58,–
WB 3/50	50	20	446626 0320	77,50
WB 3/50	50	25	446626 0325	77,50
WB 3/50	50	32	446626 0332	77,50
WB 3/50	50	40	446626 0340	77,50
WB 4/60	60	25	446626 0425	98,50
WB 4/60	60	32	446626 0432	98,50
WB 4/60	60	40	446626 0440	98,50

4136

Quick-release holder, type WDR

- External machining

Type	suitable for	N mm	O mm	P mm	R mm	S mm	U mm	Weight kg	art.no.	€
WDR 1/12	RD1/RD1+IK/UD1	100	24	47	14	22	16	0.8	**446630** 0112	134,50
WDR 1/20	RD1/RD1+IK/UD1	100	33	52	20	22	16	0.9	446630 0120	158,–
WDR 2/25	RD2/RD2+IK/UD2	130	36	66	19	33	20	2.1	446630 0225	199,–
WDR 3/32	RD3/RD3+IK/UD3	165	44	76	25	33	25	3.4	446630 0332	307,–
WDR 3/40	RD3/RD3+IK/UD3	165	44	76	25	43	25	3.4	446630 0340	307,–
WDR 4/40	RD4/RD4+IC	190	53	96	30	44	30	5.8	446630 0440	502,–
WDR 4/50	RD4/RD4+IC	190	63	96	40	54	30	6	446630 0450	502,–

4136

Quick-release holder, type WBW

- Blank

Type	suitable for	N mm	O mm	P mm	Weight kg	art.no.	€
WBW 1/30	RD1/RD1+IK/UD1	84	39	47	1.4	**446650** 0130	123,50
WBW 2/40	RD2/RD2+IK/UD2	110	51	62	3.2	446650 0240	195,50
WBW 3/40	RD3/RD3+IK/UD3	140	53	66	4.3	446650 0340	291,–
WBW 3/50	RD3/RD3+IK/UD3	140	63	76	5.7	446650 0350	319,–
WBW 4/60	RD4/RD4+IC	160	77	96	10	446650 0460	555,–

4136

Clamping jaw finder

- Jaws for approx. 3,000 different chuck types
- Find the right jaws for your chuck quickly and easily.
- Easy to find and quick to order with lightning-fast delivery!

www.spannbackenfinder.de

Overview of tool holding fixtures

Holding fixtures		DIN 69893 A HSK-A	DIN ISO 7388-1 DIN 69871	DIN 7388-2 J MAS-BT	DIN 2080	Str. shank
	OZ collet chuck	**431509....** 1121	**431503....** 1121	**431507....** 1121	**431501....** 1121	
	ER collet chuck	**431009....** 1124	**431003....** 1124	**431007....** 1125	**431001....** 1125	**431016....** 1125
	Drill chuck holding fixtures		**436103....** 1100	**436107....** 1100	**436101....** 1100	**400185....** 1101
	NC short drill chuck with worm gear ATORN	**440124....** 1002	**440127....** 1002	**440128....** 1002		
	NC short drill chuck with spur gear system ATORN	**440137....** 1002	**440135....** 1102	**440136....** 1002		
	NC short drill chuck with spur gear system SARA		**440243....** 1003	**440241....** 1003	**440242 ....** 1003	
	NC short drill chuck with spur gear system WTE		**441005....** 1003	**441007....** 1003	**441001....** 1003	
	ATORN micro universal chuck					**442401....** 1104
	ATORN precision ER collet chuck	**431236....** 1005	**431235....** 1005			
	CENTRO-P precision ER collet chuck	**431232....** 1106	**431230....** 1106			
	APC precision chuck	**440122....** 1108	**440120....** 1108			
	HG high-precision chuck	**431219....** 1117	**431213....** 1117			
	Ultra-slim hydraulic expansion chuck	**433341....** 1113	**433340....** 1113	**433342....** 1113		
	ATORN high-speed hydraulic expansion chuck	**433409....** 1111	**433411....** 1111			
	ATORN hydraulic expansion chuck		**433311....** 1111			
	ER collet chuck extension					**432000....** 1131
	DIN 6359 (WELDON) milling cutter holding fixture	**434509....** 1133	**434503....** 1133	**434507....** 1134	**434501....** 1134	
	Transverse slot shell-type milling cutter arbour	**435309....** 1135	**435303....** 1135	**435307....** 1136	**435301....** 1136	
	Combination shell-type milling cutter arbour	**434909....** 1137	**434903....** 1137	**434907....** 1138	**434901....** 1138	
	Adapter sleeves for MT with tangs	**433509....** 1139	**433503....** 1140	**433507....** 1140	**433501....** 1140	

Holding fixtures		DIN 69893 A HSK-A	DIN ISO 7388-1 DIN 69871	DIN 7388-2 J MAS-BT	DIN 2080	Str. shank
	Adapter sleeves for steep-angle tapers		**433903....** 1142	**433907....** 1142	**433901....** 1142	
	Adapter sleeves for MT with clamping threads		**433703....** 1142	**433707....** 1143		
	Tool holding fixtures for indexable insert drills		**434540....** 1143			
	Tool holding fixtures for screw-in milling cutters	**430236....** 1143	**430235....** 1144			
	ThermoGrip shrink fit holders	**430218....** 1149	**430216....** 1149			
	ThermoGrip JetSleeve2® shrink fit holders	**430231....** 1150	**430230....** 1150			
	ATORN shrink fit holding fixtures 3°	**440431....** 1151	**440430....** 1152			
	ATORN shrink fit holding fixtures for heavy-duty machining 4,5°	**440231....** 1153	**440230....** 1154			
	Thread cutting quick-change chuck		**442003....** 1157	**442007....** 1157	**442001....** 1157	**442008....** 1157
	Thread cutting synchronised chuck ATORN	**442021....** 1161	**442020....** 1161			**442022....** 1161
	Boring bar blanks		**431002....** 1163		**431000....** 1163	
	Micro precision chuck AMC	**441140....** 1110	**442140....** 1110	**443140....** 1110		
	Hydraulic expansion chuck HYDRO-Grip HD	**433826....** 1112	**433806....** 1112	**433816....** 1112		
	Hydraulic expansion chuck HG PENCIL	**433801....** 1114	**433802....** 1114	**433803....** 1115		**433811....** 1115
	ER collet chuck with planar support		**431203....** 1118	**431107....** 1118		
	Milling cutter mount DIN6359 (Weldon) with planar support		**434603....** 1119	**434607....** 1119		
	Transverse slot shell-type milling cutter arbour with planar support		**435403....** 1120	**435407....** 1120		
	Extension for modular milling cutter heads					**430352....** 1145
	Shrink-fit extensions					**430228....** 1148

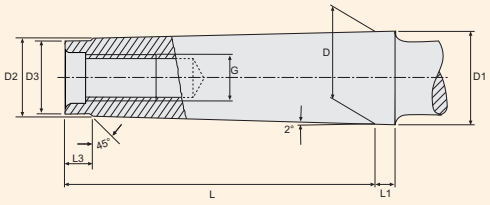
Shank designs

INFO

For milling machines and machining centres

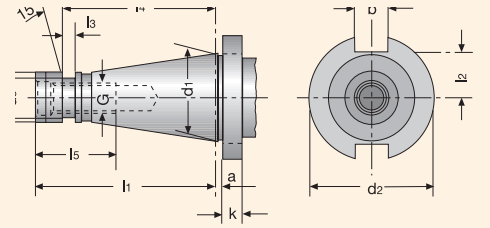
Morse taper
DIN 228 shape A (conical shank with clamping thread)

MK	D	D1	D2	D3	L	L1	L3	G
0	9,045	9,2	6,4	6,0	50,0	3,0	4	-
1	12,065	12,2	9,4	9,0	53,5	3,5	5	M 6
2	17,780	18,0	14,6	14,0	64,0	5,0	5	M10
3	23,825	24,1	19,8	19,0	81,0	5,0	7	M12
4	31,267	31,6	25,9	25,0	102,5	6,5	9	M16
5	44,399	44,7	37,6	35,7	129,5	6,5	10	M20
6	63,348	63,8	53,9	51,0	182,0	8,0	16	M24



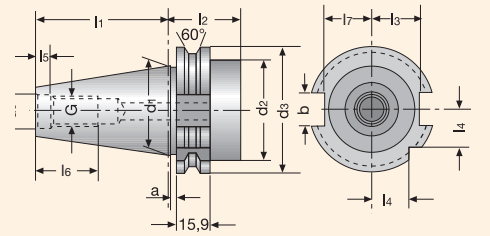
Steep taper shanks, DIN 2080 part 1 shape A

SK	d1	a	b	k	G	d2	d3	d4	l1	l2	l3	l4	l5
30	31,75	1,6	16,1	8	M12	50	-	17,2	68,4	16,2	-	-	24
40	44,45	1,6	16,1	10	M16	63	21,1	25	93,4	22,5	7	82	32
50	69,85	3,2	25,7	12	M24	97,5	-	39,2	126,8	35,3	-	-	47



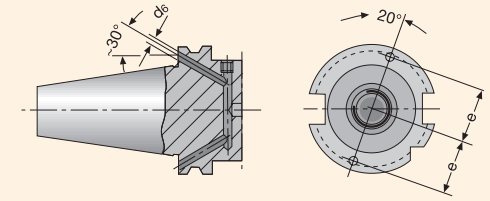
Steep-taper shanks DIN ISO 7388-1 / DIN 69871 part 1 shame A or shape AD with internal coolant supply

SK	G	d1	d2max	d3	d5		l1	l2	l3	l4	l5	l6	l7	a		
30	M12	31,75	45	50,00	13		47,80	35	19,0	15,0	5,5	24	16,4	3,2		
40	M16	44,45	50	63,55	17		68,40	35	25,0	18,5	8,2	32	22,8	3,2		
50	M24	69,85	80	97,50	25		101,75	35	37,7	30,0	11,5	47	35,5	3,2		



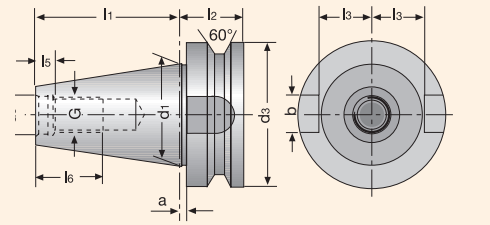
Steep-taper shanks DIN ISO 7388-1 / DIN 69871 part 1 shape B, with coolant supply via the collar

SK	G	d1	d2max	d3	d5	d6	l1	l2	l3	l4	l5	l6	l7	a	e	b
30	M12	31,75	45	50,00	13	4	47,80	35	19,0	15,0	5,5	24	16,4	3,2	21	16,1
40	M16	44,45	50	63,55	17	4	68,40	35	25,0	18,5	8,2	32	22,8	3,2	27	16,1
50	M24	69,85	80	97,5	25	6	101,75	35	37,7	30,0	11,5	47	35,5	3,2	42	25,7



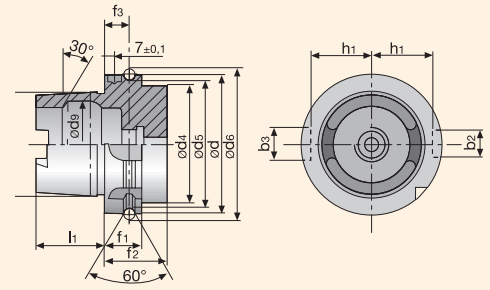
Steep-taper shanks DIN ISO 7388-2 J / MAS 403 BT

SK	G	d1		d3	d5		l1	l2	l3		l5	l6		a		b
30	M12	31,75		46	12,5		48,4	22	16,3		7,0	24		2		16,1
40	M16	44,45		63	17,0		65,4	27	22,5		8,2	32		2		16,1
50	M24	69,85		100	25,0		101,8	38	35,3		11,0	47		3		25,7



Hollow taper shank DIN 69893 shape A (HSK-A) with internal coolant supply

HSK	b2	b3	d2	d4	d5	d6	d9	f1	f2	f3	l1	h1
40	9	11	30	34	43	45	25,5	20	35	16	20	17
50	12	14	38	42	43	59,3	32	26	42	18	25	21
63	16	18	48	53	55	72,3	40	26	42	18	32	26,5



The di˜er ent forms of hollow-taper shanks DIN 69893 (HSK)

Shape A - Automatic tool switching
- Central coolant supply
- **Additional T**, a slot in the taper is a tighter fit

Shape B - As shape A, but with enlarged collar

Shape C - Central coolant supply
- without gripper groove

Shape D - As shape C, but with additional coolant supply via the collar

Shape E - For HSC machining
- Central coolant supply
- without carrier grooves, with gripper groove

Shape F - As shape E, but with enlarged collar

Depending on the design type, a coolant transfer pipe may be required for some machines with an HSK holding fixture. Please observe the machine manufacturer's information.

Universal workpiece stop Stop-Loc

- **High-strength aluminium design**
- Adjustment range up to 140 mm
- Triangular with 2 setting V-blocks

Length mm	art.no.	€
150	**421304** 0001	33,50

4153

Aluminium assembly aid

Can be used horizontally and vertically

- With steep-angle taper holder
- Aluminium assembly block
- Secured against falling out

Shank	L mm	B mm	H mm	art.no.	€
SK 30	127	47	75	**438049** 0030	132,–
SK 40	160	62	105	438049 0040	132,–
SK 50	180	99	155	438049 0050	205,–

4117

Steel assembly aid, swivel-mounted

Can be used horizontally and vertically, swivel-mounted

also for HSK and VDI

- Steel housing
- Support bracket rotatable through two directions at 45° intervals
- Secured against falling out
- Attachment holes in the base plate

Shank	L mm	B mm	H mm	art.no.	€
SK 30	125	64	121	**438051** 0030	194,–
SK 40	130	64	136	438051 0040	194,–
SK 50	170	72	170	438051 0050	230,–
VDI 20	100	48	97	438051 0120	225,–
VDI 30	130	64	121	438051 0130	225,–
VDI 40	130	64	136	438051 0140	225,–
VDI 50	170	72	170	438051 0150	250,–
HSK 40	100	48	97	438051 0240	225,–
HSK 63	130	64	136	438051 0263	250,–
HSK 100	170	72	170	438051 0210	255,–

4117

SARA® Assembly system

- Aluminium housing
- 4 x 90° swivel-mounted
- Steel modular tool holders
- Quick and easy replacement of holding fixtu es
- High fl xibility
- Positive-locking fixing of he tools
- No damage to cone tip
- **Interchangeable adapter for polygon shank according to DIN 26623-1 also available**

438180 0001

Assembly system

Designation	art.no.	€
Basic unit, 4 x 90° swivel-mounted for interchangeable adapter	**438180** 0001	175,–

4136

Interchangeable adapter

For DIN 69893 Form A (HSK-A)

Designation	art.no.	€
Tool holder HSK 40	**438382** 0040	176,–
Tool holder HSK 50	438382 0050	176,–
Tool holder HSK 63	438382 0063	176,–
Tool holder HSK 80	438382 0080	235,–
Tool holder HSK 100	438382 0100	235,–

4136

Interchangeable adapter

For DIN ISO 7388-1 (DIN 69871) / 7388-2 (JIS B) and DIN 2080

Designation	art.no.	€
Tool holder SK 30	**438181** 0030	172,50
Tool holder SK 40	438181 0040	172,50
Tool holder SK 50	438181 0050	225,–

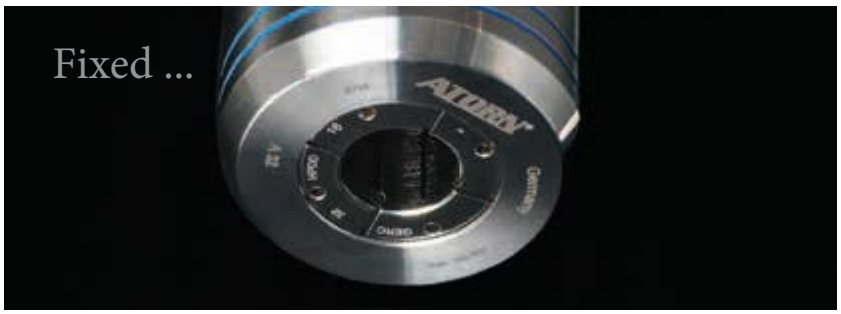
4136

Interchangeable adapter

For DIN 69880 (VDI)

Designation	art.no.	€
Tool holder VDI 20	**438383** 0020	176,–
Tool holder VDI 30	438383 0030	176,–
Tool holder VDI 40	438383 0040	202,50
Tool holder VDI 50	438383 0050	202,50

4136



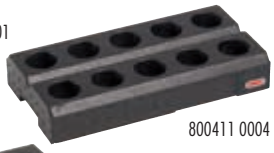
... and stable.

ATORN®
Performance demands quality

SARA® CNC foam stand for tool holders

- For careful, space-saving storage and arrangement of tool holders
- Made from EPP (expanded polypropylene) particle foam
- Oil, acid and coolant resistant, shock and fracture-proof
- Low unladen weight, easy to clean
- Holders can easily be cut to size and customised with a band saw
- Holders can be joined together easily and securely with a glue gun
- Supplied without tools

800411 0001



800411 0004

800411 0002

800411 0003

800411 0005

Foam tool holder stand

Holding fixtu es	Number of holding fixtu es	Width mm	Depth mm	Total height mm	Weight kg	art.no.	€
SK 40	6	595	90	100	0.226	**800411** 0001	17,30
SK 40	12	360	250	200	0.473	800411 0002	48,70
SK 50	6	390	260	145	0.537	800411 0003	54,–
HSK 63	10	360	180	60	0.178	800411 0004	49,20
HSK 63	15	360	245	150	0.356	800411 0005	52,80

8101

bedrunka+hirth CNC stand for tool holders

- For storing and arranging tool holders
- Can be fl xibly equipped with various inserts (805030....)
- **Unless otherwise instructed, we supply the colour RAL 7035 (light grey)**
- **Two-colour CNC stands can also be ordered (see illustration)**
- **The standard colours shown below are available at no extra cost**
- **Supplied without inserts and tools**

Sample colour

Sample colour

Tool holder stand

- Our modular system offe s you a wide range of options
- 1 box with screw-fi ed sides, including handles
- Without tools or inserts

Number inserts	Width mm	Depth mm	Total height mm	model	art.no.	€
7x E1, 5x E2, 3x E3	470	120	180	WAT 500	**800406** 0001	67,–
10x E1, 7x E2, 5x E3	620	120	180	WAT 600	800406 0002	71,–
14x E1, 9x E2, 7x E3	820	120	180	WAT 800	800406 0005	76,–
16x E1, 11x E2, 8x E3	920	120	180	WAT 900	800406 0006	79,–

8101

Sample colour

Table-top stand for tool holders

- 2 or 4 holders with screw-fi ed body
- Shelf and handle
- Without tools or inserts

Number inserts	Width mm	Depth mm	Total height mm	model	art.no.	€
14x E1, 10x E2, 6x E3	425	375	300	TAG 2-1	**800406** 0010	157,–
20x E1, 14x E2, 10x E3	575	375	300	TAG 2-2	800406 0030	163,–
28x E1, 20x E2, 12x E3	425	375	525	TAG 4-1	800406 0011	229,–
40x E1, 28x E2, 20x E3	575	375	525	TAG 4-2	800406 0031	240,–

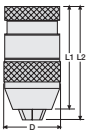
8101

Sample colour

RAL 6011 | RAL 7035 | RAL 7040 | RAL 7016 | RAL 9005 | RAL 1023 | RAL 3003 | RAL 3020 | RAL 5012 | RAL 5013 | RAL 5010

SARA® Precision drill chuck Goldstück

- **With clamp force booster**
- Special design for the highest torques (clamp forces)
- The clamp force booster can be used to double the retention force
- With **DIN 238 internal taper**
- **Suitable for clockwise rotation**
- Supplied with chuck key

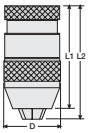


Clamping range mm	Taper support	L2 mm	L1 mm	D mm	art.no.	€
0 - 13	B 16	92	103	51.5	**400101** 0013	146,50
3 - 16	B 16	95	108	56	400101 0016	157,50

4101

ROHM Quick-release drill chuck SPIRO

- **Precision design**
- Self-clamping without key, self-acting re-tensioning
- Particularly suitable for high speeds and precision work
- **For clockwise rotation**
- **Internal taper, DIN 238**
- True-running accuracy 0.05 mm
- Further sizes available on request



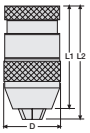
Clamping range mm	Taper support	L1 mm	L2 mm	D mm	art.no.	€
0 - 10	B 12	82.5	90.1	43	**400115** 0005	152,–
0 - 10	B 16	82.5	90.1	43	400115 0006	152,–
1 - 13	B 16	94	102.5	50	400115 0007	163,–
3 - 16	B 16	96.5	106.8	55	400115 0008	175,–

4186

ROHM Keyed drill chuck PRIMA

Internal taper, DIN 238

- Industrial version with key
- Further sizes available on request



Clamping range mm	Taper support	Wrench size	L1 mm	L2 mm	D mm	art.no.	€
0.5 - 8	B 12	S 1	47.5	57.5	29.5	**400125** 0001	29,30
1 - 10	B 16	S 2	63	77	42.8	400125 0002	32,70
1 -16	B 18	S 3	79	98	56.5	400125 0004	76,80
5 - 20	B 22	S 4	92.5	113.5	65	400125 1004	153,–

4186

Spare key

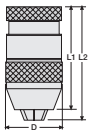
- **DIN 6349**
- For keyed drill chucks

Wrench size	Pin Ø mm	Total height mm	art.no.	€
S 1	4	30	**400140** 0001	2,77
S 2	6	41	400140 0002	2,77
S 3	8	50	400140 0003	3,88
S 4	9	75	400140 0005	4,98

4186

RÖHM Quick-release drill chuck SUPRA

- **Clockwise rotation**
- Without key, self-clamping
- Further sizes and 3/8 inch x 24 female thread available on request



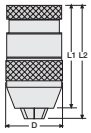
Internal taper in accordance with DIN 238

Clamping range mm	Taper support	L1 mm	L2 mm	D mm	art.no.	€
0 - 6.5	B 10	59.5	65.6	32	**400145** 0001	83,60
0 - 8	B 12	67	73.4	35.8	400145 0003	83,40
0 - 10	B 12	79.5	86.1	40.2	400145 0004	90,20
0 - 10	B 16	82.5	89.1	40.2	400145 0005	90,20
1 - 13	B 12	78.8	86.1	40.2	400145 1006	76,80
1 - 13	B 16	93	101.5	46	400145 0006	96,70
3 - 16	B 16	96.5	106.8	51	400145 0007	103,–
3 - 16	B 18	96.5	106.8	51	400145 0008	103,–

4186

RÖHM Quick-release drill chuck SUPRA SK

- **With clamping force locking mechanism**
- Industrial version
- **Clockwise rotation**
- **Female thread**
- Without key, self-clamping
- **Specifical y for hammer drills and machines with high natural frequencies**

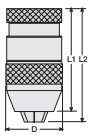


Clamping range mm	Female thread	L1 mm	L2 mm	D mm	art.no.	€
0.5 - 10	3/8'' x 24	66	73.7	40	**400155** 0001	76,80
1.0 - 13	1/2'' x 20	74.2	83.3	42.8	400155 0003	83,60

4186

ALBRECHT Precision drill chuck SBF

- Self-clamping allows for simple and quick operation
- Easy to clamp and open by hand (no key required)
- All wearing parts case-hardened, ground and replaceable
- **For clockwise rotation**
- **Internal taper DIN ISO 239-B**
- Further sizes, versions with fastening screw thread UNF and with diamond-coated clamping jaws available on request



DIN 239 B..

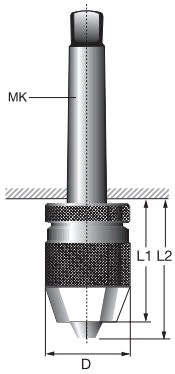
- * = DIN 239 B18 with short taper support

Clamping range mm	Taper support	L1 mm	L2 mm	D mm	art.no.	€
0.2 - 1.5	B 06	35	37	19	**400105** 0000	207,10
0.2 - 3	B 06	44	48	24	400105 0001	172,30
0.5 - 6.5	B 12	62	68	34	400105 0005	167,90
0.5 - 10	B 12	80	92	43	400105 0007	168,10
0.5 - 10	B 16	80	92	43	400105 0008	168,10
1 - 13	B 16	91	103	50	400105 0009	169,60
3 - 16	B 16	96	109	56	400105 0010	193,20
3 - 16	B 18*	96	109	56	400105 0011	193,20

4102

ALBRECHT Precision drill chuck SBF-plus

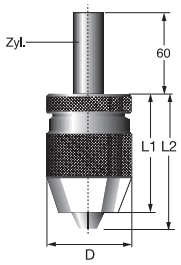
- **With mounting shank**
- Compact design
- High stability and high true-running accuracy
- **For clockwise rotation**
- **Advantage:** The SBF-plus drill chuck is a total of 21 mm shorter than two-part systems consisting of a taper and drill chuck.
- Version with diamond-coated clamping jaws available on request



Morse taper holding fixtu e

Clamping range mm	Shank	L1 mm	L2 mm	D mm	art.no.	€
1 - 13	MT 2	85	97	50	**400156** 0213	186,40
1 - 13	MT3	85	97	50	400156 0313	189,80
1 - 13	MT 4	87	99	50	400156 0413	197,30
3 - 16	MT 2	89	103	56	400156 0216	209,40
3 - 16	MT3	89	103	56	400156 0316	212,70
3 - 16	MT 4	90	104	56	400156 0416	220,70

4102



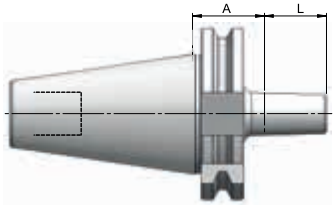
Straight shank

Clamping range mm	Shank Ø mm	L1 mm	L2 mm	D mm	art.no.	€
1 - 13	16 x 60	79	91	50	**400156** 1613	185,80

4102

SARA® Drill chuck holding fixtu es

DIN 238



- **Without drill chuck**
- Alloyed case-hardened steel with a core tensile strength of min. 800 N/mm²
- Case-hardened to HRc 60 ± 2 (HV 700 ± 50), case depth 0.8 mm ± 0.2 mm, burnished
- Pre-balanced to G 6.3 / 15,000 rpm
- **Accuracy:** Taper angle tolerance quality < AT3 in accordance with DIN 7187 and DIN 2080
- Max. true running accuracy < 0.005 mm
- SK 30 holding fixtu es available on request

DIN ISO 7388-1 / DIN 69871 A

Shank	Taper support	A mm	L mm	art.no.	€
SK 40	B 12	25	18.5	**436103** 4012	38,–
SK 40	B 16	25	24	436103 4016	38,–
SK 40	B 18	35	32	436103 4018	38,–
SK 50	B 16	25	24	436103 5016	49,–
SK 50	B 18	25	32	436103 5018	49,–

4117

JIS B 6339 (MAS 403 BT) A

Shank	Taper support	A mm	L mm	art.no.	€
SK 40	B 12	32	18.5	**436107** 4012	38,–
SK 40	B 16	32	24	436107 4016	38,–
SK 40	B 18	32	32	436107 4018	38,–
SK 50	B 16	43	24	436107 5016	49,–
SK 50	B 18	43	32	436107 5018	49,–

4117

DIN 2080

Shank	Taper support	A mm	L mm	art.no.	€
SK 40	B 12	15	18.5	**436101** 4012	37,–
SK 40	B 16	17	24	436101 4016	37,–
SK 40	B 18	17	32	436101 4018	37,–
SK 50	B 16	20	24	436101 5016	48,–
SK 50	B 18	20	32	436101 5018	48,–

4117

SARA® Plug-in shank

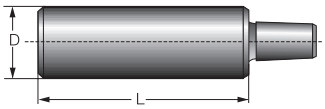
- **For drill chucks with internal tapers in accordance with DIN 238-B**
- **With Morse taper shank and tangs**
- Hardened and ground
- Further sizes available on request

Shank	Taper support	Taper Ø mm	art.no.	€
MT 1	B 10	10.095	**400180** 0110	6,75
MT 1	B 12	12.065	400180 0112	6,75
MT 1	B 16	15.733	400180 0116	6,75
MT 1	B 18	17.78	400180 0118	7,–
MT 2	B 10	10.095	400180 0210	7,65
MT 2	B 12	12.065	400180 0212	7,60
MT 2	B 16	15.733	400180 0216	7,60
MT 2	B 18	17.78	400180 0218	7,60
MT3	B 12	12.065	400180 0312	10,–
MT3	B 16	15.733	400180 0316	10,20
MT3	B 18	17.78	400180 0318	10,45
MT3	B 22	21.793	400180 0322	10,75
MT 4	B 16	15.733	400180 0416	16,85
MT 4	B 18	17.78	400180 0418	17,05
MT 4	B 22	21.793	400180 0422	17,20
MT 5	B 16	15.733	400180 0516	28,50
MT 5	B 18	17.78	400180 0518	29,60
MT 5	B 22	21.793	400180 0522	32,30

4107

ALBRECHT Precision plug-in shank

- **For drill chucks with internal tapers in accordance with DIN 239-B**
- Precision version, hardened and ground
- True-running accuracy 2 µm
- Further sizes available on request

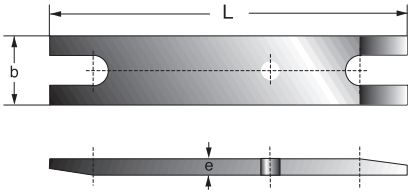


D mm	L mm	Taper support	art.no.	€
6	35	B 06	**400185** 0606	16,60
8	35	B 10	400185 0810	16,60
10	50	B 10	400185 1010	20,70
10	50	B 12	400185 1012	20,70
12	60	B 16	400185 1216	27,90
16	50	B 16	400185 1616	27,90
20	60	B 16	400185 2016	30,30

4102

ALBRECHT Chuck removal tool ADG

- Properly removes drill chucks from the drill chuck holding fixtu e
- Prevents damage to drill chucks, machine spindles or taper mandrels



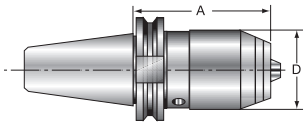
b mm	e mm	L mm	suitable for taper support	art.no.	€
20	10	120	B 06	**400550** 0006	25,10
30	10	170	B 10, B 12	400550 1012	35,40
40	12	210	B 16, B 18	400550 1618	37,40

4102

ATORN® NC short drill chuck with worm gear

- **Clamping by means of an integrated worm gear**
- Clamping range 1.0 to 16.0 mm
- High true running accuracy, max. 0.03 mm
- **Suitable for clockwise and anti-clockwise rotation**
- Minimum span length 22 mm at a diameter of 1.0 mm
- Long service life, wearing parts hardened and ground
- Balanced up to 7000 rpm With a residual imbalance of max. 40 g/mm
- Supplied with hexagonal key
- Max. permitted rotational speed with balanced tool 35,000 rpm

Clamping range 1.0 to 16.0 mm with internal coolant supply



DIN 69893 A (HSK)

- Internal coolant supply

Shank	Clamping range mm	A mm	D mm	Tightening torque max. N·m	Retention force N	Wr. width mm	True running accuracy mm	art.no.	€
HSK 63	1 - 16	100	50	10	90	4	0.03	**440129** 6316 4101	299,–

DIN ISO 7388-1 / DIN 69871 AD

- Internal coolant supply

Shank	Clamping range mm	A mm	D mm	Tightening torque max. N·m	Retention force N	Wr. width mm	True running accuracy mm	art.no.	€
SK 40	1 - 16	80	50	10	90	4	0.03	**440127** 4016 4101	230,–
SK 50	1 - 16	80	50	10	90	4	0.03	440127 5016 4101	299,–

JIS B 6339 A (MAS BT)

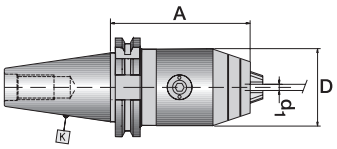
- Internal coolant supply

Shank	Clamping range mm	A mm	D mm	Tightening torque max. N·m	Retention force N	Wr. width mm	True running accuracy mm	art.no.	€
BT 40	1 - 16	88	50	10	90	4	0.03	**440128** 4016 4101	230,–

ATORN® NC short drill chuck with spur gear system

- **Clamping by means of a spur gear system**
- **Suitable for clockwise and anticlockwise rotation**
- True-running accuracy 0.02 mm
- Short clamping and retooling times
- Very short design
- For drilling, reaming, countersinking, thread cutting and simple finishing ork on machining centres and CNC lathes
- Pre-balanced to G 6.3 at 25,000 rpm
- Max. permitted speed with balanced tool 35,000 rpm
- Max. permitted speed with unbalanced tool 7,000 rpm

Clamping range 0.5 to 16.0 mm



DIN 69893 – HSK type A

- Internal coolant supply

Shank	Clamping range mm	A mm	D mm	Tightening torque max. N·m	Retention force N	Wr. width mm	True running accuracy mm	art.no.	€
HSK-A 63	0.5 - 16	109	57	20	90	6	0.02	**440137** 6316 4101	299,–

DIN ISO 7388-1 AD / DIN 69871 AD/AF

- Internal coolant supply

Shank	Clamping range mm	A mm	D mm	Tightening torque max. N·m	Retention force N	Wr. width mm	True running accuracy mm	art.no.	€
SK 40	0.5 - 16	90	57	20	90	6	0.02	**440139** 4016 4101	230,–

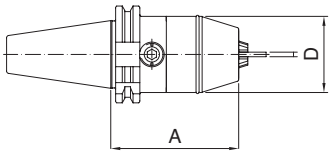
JIS B 6339 A (JIS B 6339)

- Internal coolant supply

Shank	Clamping range mm	A mm	D mm	Tightening torque max. N·m	Retention force N	Wr. width mm	True running accuracy mm	art.no.	€
SK 40	0.5 - 16	90	57	20	90	6	0.02	**440136** 4016 4101	230,–

SARA® NC short drill chuck with spur gear system

- **Clamping via spur gear system**
- **Clockwise and anti-clockwise rotation**
- **True running accuracy 0.05 mm**
- Reliable bevel-pinion gear
- Slim design
- Max. permitted rotational speed with unbalanced tool 7,000 rpm



DIN ISO 7388-1 Form A / DIN 69871

Shank	Clamping range mm	D mm	A mm	Tightening torque max. N·m	Retention force N	Wr. width mm	True running accuracy mm	art.no.	€
SK 40	0.5 - 13	50	84	20	40	6	0.05	**440243** 4013	185,–
SK 40	2.5 - 16	57	84	20	40	6	0.05	440243 4016	190,–
								4108	

DIN ISO 7388-2 Form A / (JIS B6339)

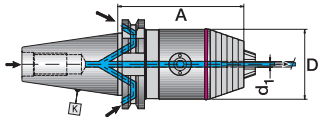
Shank	Clamping range mm	D mm	A mm	Tightening torque max. N·m	Retention force N	Wr. width mm	True running accuracy mm	art.no.	€
SK 40	0.5 - 13	50	94	20	40	6	0.05	**440241** 4013	185,–
SK 40	2.5 - 16	57	94	20	40	6	0.05	440241 4016	190,–
								4108	

DIN 2080 Form A

Shank	Clamping range mm	D mm	A mm	Tightening torque max. N·m	Retention force N	Wr. width mm	True running accuracy mm	art.no.	€
SK 40	0.5 -13	50	78	20	40	6	0.05	**440242** 4013	185,–
SK 40	2.5 - 16	57	78	20	40	6	0.05	440242 4016	190,–
								4108	

wte NC short drill chuck with spur gear system

- **Clamping via spur gear system**
- True running accuracy 0.02 mm
- High clamping force
- Short clamping and retrofitting time
- Very short design
- **Suitable for clockwise and anti-clockwise rotation**
- Further DIN versions available on request
- Pre-balanced to G 6.3 / 25,000 rpm
- Max. permitted rotational speed with balanced tool 35,000 rpm



DIN ISO 7388-1 / DIN 69871

Shank	Clamping range mm	D mm	A mm	Tightening torque max. N·m	Retention force N	Wr. width mm	True running accuracy mm	**Type A** art.no.	€	**Type AD/B** art.no.	€
SK 40	0.5 - 13	50	90	20	80	6	0.02	**441003** 4013	239,–	**441005** 4013	305,–
SK 50	0.5 - 13	50	106	20	80	6	0.02	441003 5013	330,–	441005 5013	370,–
								4108		4108	

MAS 403 BT - type AD/AF

Shank	Clamping range mm	D mm	A mm	Tightening torque max. N·m	Retention force N	Wr. width mm	True running accuracy mm	art.no.	€
BT 40	0.5 - 13	50	98	20	80	6	0.02	**441007** 4013	305,–
BT 50	0.5 - 13	50	110	20	80	6	0.02	441007 5013	370,–
								4108	

DIN 2080

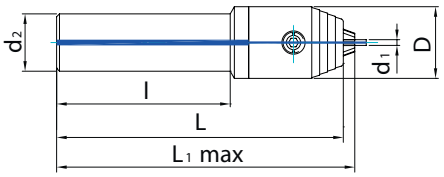
Shank	Clamping range mm	D mm	A mm	Tightening torque max. N·m	Retention force N	Wr. width mm	True running accuracy mm	art.no.	€
SK 40	0.5 - 13	50	83	20	80	6	0.02	**441001** 4013	270,–
SK 50	0.5 - 13	50	100	20	80	6	0.02	441001 5013	330,–
								4108	

With internal taper in accordance with DIN 238

Shank	Clamping range mm	D mm	A mm	Tightening torque max. N·m	Retention force N	Wr. width mm	art.no.	€
B 16	0.5 - 13	50	102	20	80	6	**441011** 1316	255,–
B 16	2.5 - 16	57	107	20	90	6	441011 1616	260,–
							4108	

ATORN® Micro universal chuck

- Specially developed for micro-machining
- For machining applications in the fields of medical te hnology, clock and watchmaking, precision engineering and electrical engineering
- **Pre-balanced to G 2.5 / 25,000 rpm**
- True running accuracy 0.005 mm
- Clamping range from 0.2 to 3.4 mm and 0.2 to 6.4 mm



Clamping range 0.2 to 3.4 mm

Shank	D mm	d1 mm	d2 mm	l mm	L mm	L max. mm	Weight kg	art.no.	€
Ø 16	19	0.2-3.4	16	50	80	83	0.13	**442401** 1608	398,–
Ø 16	19	0.2-3.4	16	70	100	103	0.16	442401 1610	421,–
Ø 16	19	0.2-3.4	16	130	160	163	0.26	442401 1616	465,–
Ø 20	19	0.2-3.4	20	52	80	83	0.17	442401 2008	398,–
Ø 20	19	0.2-3.4	20	72	100	103	0.21	442401 2010	421,–
Ø 20	19	0.2-3.4	20	132	160	163	0.36	442401 2016	465,–

4123

Clamping range 0.2 to 6.4 mm

Shank	D mm	d1 mm	d2 mm	l mm	L mm	L max. mm	Weight kg	art.no.	€
Ø 16	25	0.2-6.4	16	60	100	104	0.3	**442402** 1610	421,–
Ø 16	25	0.2-6.4	16	110	150	154	0.5	442402 1615	443,–
Ø 16	25	0.2-6.4	16	160	200	204	0.7	442402 1620	479,–
Ø 20	25	0.2-6.4	20	60	100	104	0.4	442402 2010	421,–
Ø 20	25	0.2-6.4	20	110	150	154	0.6	442402 2015	443,–
Ø 20	25	0.2-6.4	20	160	200	204	0.8	442402 2020	479,–

4123

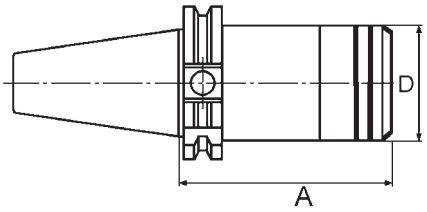
… ab Ø 0,2 mm

ATORN®
Leistung braucht Qualität

ATORN® Precision ER collet chuck

True-running accuracy 3 µm incl. clamping nut

- **30° ground trapezoidal thread with special anti-friction coating**
- Up to twice the holding forces of conventional collet chucks are possible thanks to lower friction when tightening the nut and due to the collet being seated entirely inside the chuck cone.
- Resistant to temperature fluctuations and fully suitable for dry processes and hard milling up to 200 °C.
- Clamping forces are distributed evenly across the entire cylindrical surface, and optimum radial force absorption produces perfect surfaces
- Excellent damping properties
- Increasing the chuck body to the diameter of the clamping nut creates enormous stability without any protruding contours.
- **Extremely high concentricity and precision, 3 µm**
- **Pre-balanced to G 2.5 at 22,000 rpm**
- **Leak-proof up to 80 bar with radially sealed collets**
- **For all GER collets**
- **Supplied with clamping nut**
- **Please order roller chuck key separately**
  Torque wrench recommended



DIN 69893 HSK-A, incl. clamping nut

- Internal coolant supply
- When machining with internal coolant supply, a coolant transfer pipe with art.no. 431011... should be used

Shank	Clamping range mm	for collets	A mm	D mm	art.no.	€
HSK-A 63	1-10	GER16	55	30	**431236** 1606	141,–
HSK-A 63	1-10	GER16	100	30	431236 1610	141,–
HSK-A 63	1-10	GER16	160	30	431236 1616	176,–
HSK-A 63	2-16	GER25	100	40	431236 2510	144,–
HSK-A 63	2-16	GER25	160	40	431236 2516	189,–
HSK-A 63	2-20	GER32	70	50	431236 3207	146,–
HSK-A 63	2-20	GER32	100	50	431236 3210	146,–
HSK-A 63	2-20	GER32	160	50	431236 3216	191,–

4178

DIN ISO 7388-1 / DIN 69871 AD, incl. clamping nut

- Internal coolant supply

Shank	Clamping range mm	for collets	A mm	D mm	art.no.	€
SK 40	1-10	GER16	70	30	**431235** 1607	111,–
SK 40	1-10	GER16	100	30	431235 1610	121,–
SK 40	1-10	GER16	160	30	431235 1616	161,–
SK 40	2-16	GER25	70	40	431235 2507	114,–
SK 40	2-16	GER25	100	40	431235 2510	124,–
SK 40	2-16	GER25	160	40	431235 2516	174,–
SK 40	2-20	GER32	70	50	431235 3207	116,–
SK 40	2-20	GER32	100	50	431235 3210	126,–
SK 40	2-20	GER32	160	50	431235 3216	176,–

4178

Roller chuck key

Designation	for clamping nut	art.no.	€
RO 30	HPC16 / HPC16-DI	**431240** 3016	60,–
RO 40	HPC25 / HPC25-DI	431240 3030	60,–
RO 50	HPC32 / HPC32-DI	431240 5032	60,–

4118

Torque roller chuck key attachment

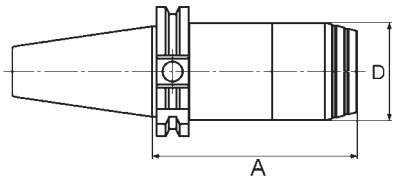
Designation	for clamping nut	for type	art.no.	€
DRO 30	HPC16 / HPC16-DI	7026030002	**431242** 3016	60,–
DRO 40	HPC25 / HPC25-DI	7026030003	431242 4025	60,–
DRO 50	HPC32 / HPC32-DI	7026030003	431242 5032	60,–

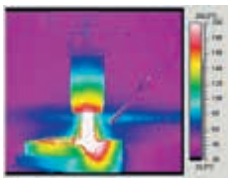
4118

FAHRION® PRAZISION CENTRO|P precision ER collet chuck

True-running accuracy 1 µm

- **30° trapezoidal thread**
- With ground, extra-long double guide compared to 60° V-thread in conventional collet chucks
- Coated clamping nut reduces friction when tightening the nut
- Exact nut centring to minimise imbalance
- **Up to 100 % higher holding forces** compared with conventional collet chucks
- **Pre-balanced to G 2.5 at 25,000 rpm**
- **Entirely suitable** for dry processes and hard milling
- Insensitive to temperature fluctuations up to 200 °
- **Leak-proof** up to 80 bar, cooling possible along the cutting edge
- **Extremely high system concentricity and precision of 3 µm achieved with a 2 µm GER-HP collet**
- **Supplied without clamping nuts or a chuck key, please order separately!**
- Slim and conical versions available on request





DIN 69893 type A (HSK-A)

- Internal coolant supply
- When machining with internal coolant supply, a coolant transfer pipe with art.no. 431011... should be used

Shank	Clamping range mm	for collets	A mm	D mm	art.no.	€
HSK 63	2 - 20	GER32-HP/-HPD/-HPDD	70	50	**431232** 0750	119,–
HSK 63	1 - 10	GER16-HP/-HPD/-HPDD	100	30	431232 1030	119,–
HSK 63	2 - 20	GER32-HP/-HPD/-HPDD	100	50	431232 1050	119,–
HSK 63	1 - 10	GER16-HP/-HPD/-HPDD	160	30	431232 1630	165,–
HSK 63	2 - 20	GER32-HP/-HPD/-HPDD	160	50	431232 1650	175,–

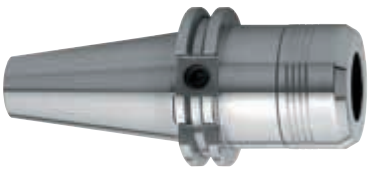
4118

DIN ISO 7388-1 / DIN 69871 AD/AF

- Internal coolant supply

Shank	Clamping range mm	for collets	A mm	D mm	art.no.	€
SK 40	2 - 16	GER25-HP/-HPD/-HPDD	45	40	**431230** 0440	109,–
SK 40	2 - 20	GER32-HP/-HPD/-HPDD	50	50	431230 0550	95,–
SK 40	1 - 10	GER16-HP/-HPD/-HPDD	70	30	431230 0730	90,–
SK 40	2 - 16	GER25-HP/-HPD/-HPDD	70	40	431230 0740	90,–
SK 40	2 - 20	GER32-HP/-HPD/-HPDD	70	50	431230 0750	90,–
SK 40	1 - 10	GER16-HP/-HPD/-HPDD	100	30	431230 1030	100,–
SK 40	2 - 16	GER25-HP/-HPD/-HPDD	100	40	431230 1040	100,–
SK 40	2 - 20	GER32-HP/-HPD/-HPDD	100	50	431230 1050	100,–
SK 40	1 - 10	GER16-HP/-HPD/-HPDD	160	30	431230 1630	155,–
SK 40	2 - 16	GER25-HP/-HPD/-HPDD	160	40	431230 1640	165,–
SK 40	2 - 20	GER32-HP/-HPD/-HPDD	160	50	431230 1650	165,–

4118



Clamping nuts (nuts for HPC...-DI sealing washers)

for collets	D mm	Designation	art.no.	€
GER16-HP/-HPD/-HPDD	30	HPC-16	**431237** 0016	28,–
GER16-HP/-HPD/-HPDD	30	HPC-16-DI	431237 0116	35,–
GER32-HP/-HPD/-HPDD	50	HPC-32	431237 0032	33,–
GER32-HP/-HPD/-HPDD	50	HPC-32-DI	431237 0132	40,–

4118

Roller chuck key

Designation	for clamping nut	art.no.	€
RO 30	HPC16 / HPC16-DI	**431240** 3016	60,–
RO 40	HPC25 / HPC25-DI	431240 3030	60,–
RO 50	HPC32 / HPC32-DI	431240 5032	60,–

4118

Torque roller chuck key attachment

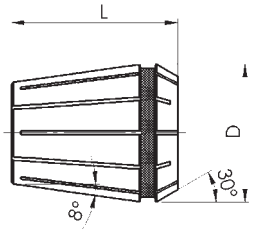
Designation	for clamping nut	for type	art.no.	€
DRO 30	HPC16 / HPC16-DI	7026030002	**431242** 3016	60,–
DRO 40	HPC25 / HPC25-DI	7026030003	431242 4025	60,–
DRO 50	HPC32 / HPC32-DI	7026030003	431242 5032	60,–

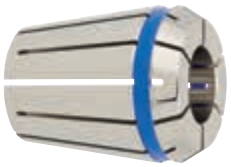
4118

FAHRION® PRAZISION GERC-HP precision collets 2 µm

- **GERC-HP, HPD and HPDD collets 2 µm**
- **For Atorn precision ER collet chuck and Fahrion CENTRO|P**
- Higher contact area ratio
- Increased rigidity and holding forces
- Greater system concentricity
- Optimum concentricity at nominal Ø
- Collapse h10

Fahrion Protect corrosion protection

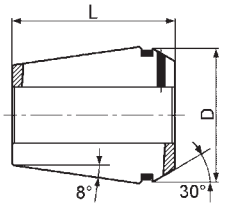


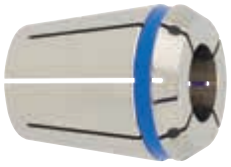


Standard version / type GER-HP

Clamp Ø mm	GERC16 / 426E D = 17 mm L = 27,5 mm art.no.	€	GERC25 / 430E D = 26 mm L = 34 mm art.no.	€	GERC32 / 470E D = 33 mm L = 40 mm art.no.	€
1	**433121** 0010	61,50				
2	433121 0020	46,25	**433122** 0020	47,75	**433123** 0020	49,–
3	433121 0030	39,50	433122 0030	40,50	433123 0030	41,–
4	433121 0040	39,50	433122 0040	40,50	433123 0040	41,–
5	433121 0050	39,50	433122 0050	40,50	433123 0050	41,–
6	433121 0060	39,50	433122 0060	40,50	433123 0060	41,–
7	433121 0070	39,50	433122 0070	40,50	433123 0070	41,–
8	433121 0080	39,50	433122 0080	40,50	433123 0080	41,–
9	433121 0090	39,50	433122 0090	40,50	433123 0090	41,–
10	433121 0100	39,50	433122 0100	40,50	433123 0100	41,–
	4118		4118		4118	

Clamp Ø mm	GERC16 / 426E D = 17 mm L = 27,5 mm art.no.	€	GERC25 / 430E D = 26 mm L = 34 mm art.no.	€	GERC32 / 470E D = 33 mm L = 40 mm art.no.	€
11			433122 0110	40,50	433123 0110	41,–
12			433122 0120	40,50	433123 0120	41,–
13			433122 0130	40,50	433123 0130	41,–
14			433122 0140	40,50	433123 0140	41,–
15			433122 0150	40,50	433123 0150	41,–
16			433122 0160	40,50	433123 0160	41,–
17					433123 0170	41,–
18					433123 0180	41,–
20					433123 0200	41,–
	4118		4118		4118	

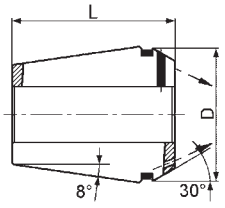


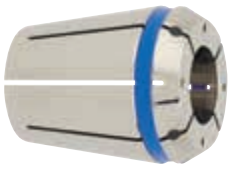


With seal for internal coolant supply / type GER-HPD

Clamp Ø mm	GERC16-HPD / 425E D = 17 mm L = 27,5 mm art.no.	€	GERC25-HPD / 429E D = 25,7 mm L = 34 mm art.no.	€	GERC32-HPD / 469E D = 32,7 mm L = 40 mm art.no.	€
3	**433124** 1603	53,–				
4	433124 1604	53,–	**433126** 2504	56,–	**433127** 3204	58,–
5	433124 1605	58,–	433126 2505	61,–	433127 3205	63,–
6	433124 1606	53,–	433126 2506	56,–	433127 3206	58,–
8	433124 1608	53,–	433126 2508	56,–	433127 3208	58,–
10	433124 1610	53,–	433126 2510	56,–	433127 3210	58,–
	4118		4118		4118	

Clamp Ø mm	GERC16-HPD / 425E D = 17 mm L = 27,5 mm art.no.	€	GERC25-HPD / 429E D = 25,7 mm L = 34 mm art.no.	€	GERC32-HPD / 469E D = 32,7 mm L = 40 mm art.no.	€
12			433126 2512	56,–	433127 3212	58,–
14			433126 2514	56,–	433127 3214	58,–
16			433126 2516	56,–	433127 3216	58,–
18					433127 3218	58,–
20					433127 3220	58,–
	4118		4118		4118	





With seals for internal coolant supply and coolant bore / type GER-HPDD

Clamp Ø mm	GERC25-HPDD / 429E D = 25,7 mm L = 34 mm art.no.	€	GERC32-HPDD / 469E D = 32,7 mm L = 40 mm art.no.	€
4	**433129** 2504	83,–	**433130** 3204	86,–
6	433129 2506	83,–	433130 3206	86,–
8	433129 2508	83,–	433130 3208	86,–
10	433129 2510	83,–	433130 3210	86,–
	4118		4118	

Clamp Ø mm	GERC25-HPDD / 429E D = 25,7 mm L = 34 mm art.no.	€	GERC32-HPDD / 469E D = 32,7 mm L = 40 mm art.no.	€
12	433129 2512	83,–	433130 3212	86,–
14	433129 2514	83,–	433130 3214	86,–
16			433130 3216	86,–
18			433130 3218	86,–
	4118		4118	

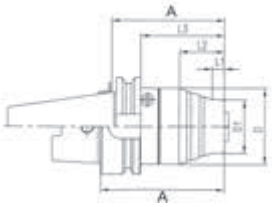
Set in a wooden box, with seals for internal coolant supply / type GER-HPD

Designation	Contents per set	Clamping range mm	art.no.	€
GERC16-HPD / 425E	Ø3-4-5-6-8-10	3 - 10	**433078** 0000	338,–
GERC20-HPD / 427E	Ø3-4-5-6-8-10-12	3 - 12	433078 0001	408,–
GERC25-HPD / 429E	Ø4-6-8-10-12-14-16	4 - 16	433078 0002	412,–
GERC32-HPD / 469E	Ø4-6-8-10-12-14-16-20	4 - 20	433078 0003	485,–
			4118	

ALBRECHT Precision chuck APC

- **True running accuracy 3 µm (at 2.5xD)**
- Greater clamping force and stability due to the enhanced clamping gear
- Clamping via a coated clamping sleeve and adjustable length stop
- Quick lateral tool changes using a hex key
- **Pre-balanced to G 2.5 at 20,000 rpm**
- Higher rotational speeds and finer balance uality available on request
- Sealed against coolant and dirt
- With precise length adjustment in the clamping sleeve
- Special steel, all parts hardened and ground
- Extremely high vibration dampening
- For heavy machining as well as HSC and HPC machining
- **Supplied without hexagonal key or clamping sleeve**
- **Additional versions available on request**

Including anti-corrosion coating



DIN 69893 HSK-A

- Internal coolant supply
- When machining with internal coolant supply, a coolant transfer pipe with art.no. 431011... should be used

Shank	Type	Clamping range mm	A mm	D mm	D1 mm	L1 mm	L2 mm	L3 mm	art.no.	€
HSK-A 63	APC14	2 - 14	178	53	30	85	103	152	**440122** 6317	453,10
HSK-A 63	APC20	2 - 20	92	53	40	20	31	66	440122 6320	343,30
HSK-A 63	APC25	16 - 32	132	63	-	-	-	106	440122 6332	436,20

4102

DIN ISO 7388-1 / DIN 69871 AD

- Internal coolant supply

Shank	Type	Clamping range mm	A mm	D mm	D1 mm	L1 mm	L2 mm	L3 mm	art.no.	€
SK 40	APC14	2 - 14	149	50	30	85	103	129	**440120** 4014	374,80
SK 40	APC20	2 - 20	63	50	40	20	28	43	440120 4020	301,60
SK 40	APC25	16 - 32	102	63	-	-	-	83	440120 4032	370,30
SK 50	APC20	2 - 20	62	63	40	18	38	43	440120 5021	371,10
SK 50	APC25	16 - 32	102	70	-	-	-	83	440120 5032	459,–

4102

Clamping sleeves with special coating

- Incl. adjustable length stop
- Sealed up to 100 bar coolant pressure

Clamp Ø mm	for type	Clamping range mm	Standard art.no.	Standard €	Sealed art.no.	Sealed €
2	APC14	2 - 14	**440130** 1402	113,60	**440131** 1402	126,30
3	APC14	2 - 14	440130 1403	88,20	440131 1403	100,70
4	APC14	2 - 14	440130 1404	88,20	440131 1404	100,70
5	APC14	2 - 14	440130 1405	88,20	440131 1405	100,70
6	APC14	2 - 14	440130 1406	88,20	440131 1406	100,70
8	APC14	2 - 14	440130 1408	88,20	440131 1408	88,20
10	APC14	2 - 14	440130 1410	88,20	440131 1410	88,20
12	APC14	2 - 14	440130 1412	88,20	440131 1412	88,20
14	APC14	2 - 14	440130 1414	88,20	440131 1414	88,20
2	APC20	2 - 20	440130 2102	113,60	440131 2102	126,30
3	APC20	2 - 20	440130 2103	88,20	440131 2103	100,70
4	APC20	2 - 20	440130 2104	88,20	440131 2104	100,70
5	APC20	2 - 20	440130 2105	88,20	440131 2105	100,70

4102 4102

Clamp Ø mm	for type	Clamping range mm	Standard art.no.	Standard €	Sealed art.no.	Sealed €
6	APC20	2 - 20	440130 2106	88,20	440131 2106	100,70
8	APC20	2 - 20	440130 2108	88,20	440131 2108	88,20
10	APC20	2 - 20	440130 2110	88,20	440131 2110	88,20
12	APC20	2 - 20	440130 2112	88,20	440131 2112	88,20
14	APC20	2 - 20	440130 2114	88,20	440131 2114	88,20
16	APC20	2 - 20	440130 2116	88,20	440131 2116	88,20
18	APC20	2 - 20	440130 2118	88,20	440131 2118	88,20
20	APC20	2 - 20	440130 2120	88,20	440131 2120	88,20
16	APC25	16 - 32	440130 3216	145,90	440131 3216	145,90
20	APC25	16 - 32	440130 3220	145,90	440131 3220	145,90
25	APC25	16 - 32	440130 3225	145,90	440131 3225	145,90
32	APC25	16 - 32	440130 3232	145,90	440131 3232	145,90

4102 4102

Chuck key for APC chucks

- Adjusted to 10 Nm

Description	Wr. width mm	art.no.	€
Chuck key for APC chucks	4	**440127** 0005	25,20

4102

ALBRECHT Clamping sleeves with pin lock for APC

- APC clamping sleeve pin lock mechanically secures the tool against pullout
- Pin lock in conjunction with Weldon shanks in accordance with DIN 6535 HB and DIN 1835 B
- All positive properties of APC such as the true running accuracy and damping properties remain unrestricted
- Special coating
- Sealed for tools with internal coolant supply
- 100 % sealed up to 100 bar coolant pressure
- **Clamping sleeves for APC20 up to and including Ø16, pre-balanced**
- **Clamping sleeves for APC25 from Ø16 to Ø20, pre-balanced**

Clamping sleeve with pin lock

- Incl. 3 lock pins and assembly tool
- For internal coolant supply

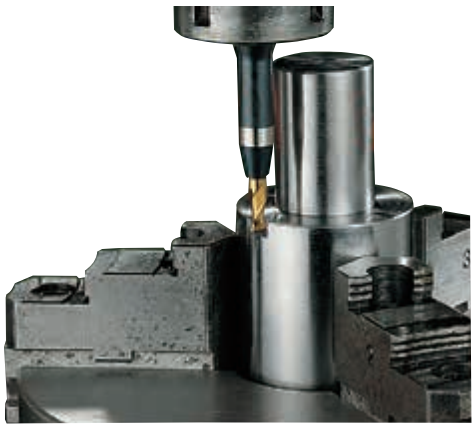
Clamp Ø mm	for type	Clamping range mm	art.no.	€
6	APC20	2 - 20	**440132** 2006	153,80
8	APC20	2 - 20	440132 2008	153,80
10	APC20	2 - 20	440132 2010	153,80
12	APC20	2 - 20	440132 2012	153,80
14	APC20	2 - 20	440132 2014	153,80
16	APC20	2 - 20	440132 2016	153,80
18	APC20	2 - 20	440132 2018	153,80
16	APC25	16 - 32	440132 2516	187,20
18	APC25	16 - 32	440132 2518	187,20
20	APC25	16 - 32	440132 2520	187,20
22	APC25	16 - 32	440132 2522	187,20
25	APC25	16 - 32	440132 2525	187,20

4102

SARA Milling cutter extension SARAmicro

- For holding tools with a clamping surface in accordance with DIN 1835 B (shank Ø 6 - 20 mm)
- Extremely slim design allows standard tools to be extended without the need for special tools
- Extremely stable due to combination clamping
- True-running accuracy: 5 µm

- **Use:** In standard tool holding fixtu es of appropriate diameter (16 / 20 / 25 or 32 mm)
- **Note:** To ensure that the tool is correctly clamped, ensure that the clamp is properly seated in the hole!

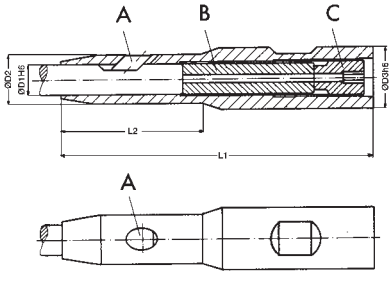


Ø mm	Length mm	D1 mm	D2 mm	D3 mm	L1 mm	L2 mm				art.no.	€
6	100	6	12	16	100	40	A1	B1	C1	**445001** 0006	168,–
8	100	8	14	16	100	45	A2	B2	C2	445001 0008	168,–
10	100	10	17	20	100	43	A3	B3	C3	445001 0010	171,–
12	110	12	20	25	110	39	A4	B4	C4	445001 0012	172,–
14	110	14	22	25	110	46	A5	B5	C5	445001 0014	191,–
16	125	16	25	32	125	45	A6	B6	C6	445001 0016	220,–
18	130	18	27	32	130	54	A7	B7	C7	445001 0018	220,–
20	130	20	30	32	130	62	A8	B8	C8	445001 0020	205,–

4122

Spare parts

Clamping wedge	art.no.	€	Clamping bar	art.no.	€	Clamping screw	art.no.	€
A1	445010 0106	16,80	B1	445010 0206	3,74	C1	445010 0306	5,60
A2	445010 0108	16,80	B2	445010 0208	3,74	C2	445010 0308	5,60
A3	445010 0110	16,80	B3	445010 0210	4,66	C3	445010 0310	6,55
A4	445010 0112	16,80	B4	445010 0212	4,66	C4	445010 0312	6,55
A5	445010 0114	16,80	B5	445010 0214	5,60	C5	445010 0314	7,50
A6	445010 0116	17,70	B6	445010 0216	6,55	C6	445010 0316	8,40
A7	445010 0118	17,70	B7	445010 0218	6,55	C7	445010 0318	8,40
A8	445010 0120	17,70	B8	445010 0220	6,55	C8	445010 0320	8,40
4122			4122			4122		



A = Clamping wedge, B = Clamping bar, C = Clamping screw

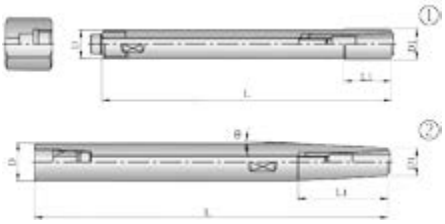
SARA® Collet holder DC

- No clamping nuts as with traditional collet holding fixtu es
- Extremely slim contour
- High true running accuracy

Collet holder DC

Illustration	D mm	D1 mm	d mm	L mm	L1 mm	Angle °	for collets	art.no.	€
1	10	9	2-4	90	14	-	DC4	**445002** 4090	249,–
2	12	9	2-4	120	38	3	DC4	445002 4120	277,–
1	12	14	2-6	120	40	-	DC6	445002 6120	249,–
2	16	14	2-6	150	35	3	DC6	445002 6150	277,–
2	20	14	2-6	200	70	3	DC6	445002 6200	347,–
2	25	14	2-6	250	115	3	DC6	445002 6250	489,–

4102



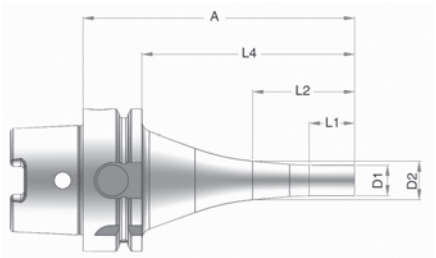
Collets DC

Designation	d mm	D mm	L mm	L1 mm	art.no.	€
DC4	2	7	31	10	**445003** 4002	86,–
DC4	3	7	31	14	445003 4003	75,–
DC4	4	7	31	14	445003 4004	75,–
DC6	3	9.6	36	14	445003 6003	75,–
DC6	4	9.6	36	14	445003 6004	75,–
DC6	6	9.6	36	16	445003 6006	75,–

4102

ALBRECHT Präzisions-Spannfutter Micro precision chuck AMC

- Ideal for micro-tools
- Clamping range 1.0 to 6.0 mm
- Optional peripheral or central cooling
- Improved damping compared with shrink-fit te hnology
- Slim protruding contour D1 = 13.5 mm
- Perfect concentricity < 3 µm for 2.5 x D
- **Pre-balanced to G 2.5 / 25,000 rpm**



DIN 69893 HSK-A

- Internal coolant supply
- When machining with inner coolant supply, a coolant transfer pipe Art. No. 431011.... should be used

Shank	A mm	L1 mm	L2 mm	L4 mm	D1 mm	D2 mm	Weight kg	art.no.	€
HSK-A 63	90	20	30	64	13.5	15.2	0.81	**441140** 6309	273,–
HSK-A 63	120	20	45	94	13.5	17.1	0.95	441140 6312	283,30

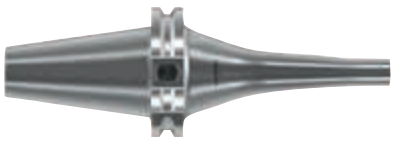
4102

DIN ISO 7388-1 AD (DIN 69871 AD)

- Internal coolant supply

Shank	A mm	L1 mm	L2 mm	L4 mm	D1 mm	D2 mm	Weight kg	art.no.	€
SK 40	90	20	38	71	13.5	16.6	1.02	**442140** 4009	252,40
SK 40	120	20	60	101	13.5	20.5	1.15	442140 4012	262,70

4102



DIN ISO 7388-2 AD (JIS B 6339)

- Internal coolant supply

Shank	A mm	L1 mm	L2 mm	L4 mm	D1 mm	D2 mm	Weight kg	art.no.	€
BT 40	90	20	30	63	13.5	15.2	1.15	**443140** 4009	252,40
BT 40	120	20	50	93	13.5	18.7	1.28	443140 4012	262,70

4102

Clamping sleeves, sealed

- Hardened, ground and coated
- For internal coolant supply

Clamp Ø mm	art.no.	€
1	**440151** 0001	166,60
2	440151 0002	108,40
3	440151 0003	90,90
4	440151 0004	90,90
5	440151 0005	90,90
6	440151 0006	90,90

4102

Clamping sleeves

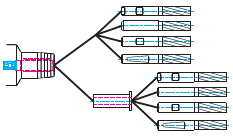
- Hardened, ground and coated

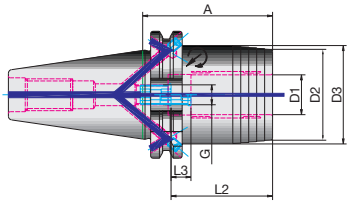
Clamp Ø mm	art.no.	€
1	**440141** 0001	145,50
2	440141 0002	87,50
3	440141 0003	75,90
4	440141 0004	75,90
5	440141 0005	75,90
6	440141 0006	75,90

4102

ATORN® Hydraulic expansion chucks

- Flexible thanks to the use of reducing bushes
- True running accuracy, maximum 3 µm
- **Balanced to G 2.5 at 25,000 rpm**
- Optimum operating temperature 20-50°C; not for use above 80°C
- Coolant pressure max. 80 bar
- Adjustment range 10 mm
- **Additional shank designs and AD/AF version available on request**
- Supplied with hexagonal T-key



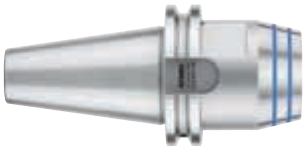


DIN ISO 7388-1 / DIN 69871 AD, short heavy-duty version

- Internal coolant supply

Shank	D1 mm	D3 mm	A mm	L2 mm	L3 mm	Thread	Weight kg	art.no.	€
SK 40	20	49.5	64.5	51	10	M16 x 1	1.3	**433311** 4020	201,–

4123



DIN ISO 7388-1 / DIN 69871 AD, ultra-short version

- Internal coolant supply

Shank	D1 mm	D2 mm	D3 mm	A mm	L2 mm	Thread	Weight kg	art.no.	€
SK 40	20	48	49.5	24.5	51	M16 x 1	0.6	**433314** 4020	245,–

4123

DIN ISO 7388-1 / DIN 69871 AD, short slim version

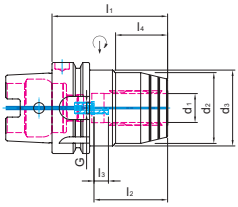
- Internal coolant supply

Shank	D1 mm	D2 mm	D3 mm	A mm	L2 mm	L3 mm	Thread	Weight kg	art.no.	€
SK 40	16	38	49.5	80.5	49	10	M12 x 1	1.4	**433303** 4016	350,–

4123

ATORN® High-performance hydraulic expansion chuck

- **Optimum operating temperature 20-100°C**
- Max. true running accuracy < 0.003 mm
- **Pre-balanced to G 2.5 at 25,000 rpm**
- With Balluff hip bore

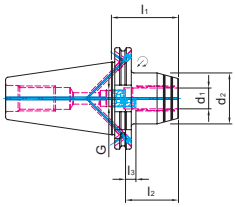


DIN 69893 HSK-A

- Internal coolant supply
- When machining with internal coolant supply, a coolant transfer pipe with art.no. 431011... should be used

Shank	d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	l4 mm	G mm	Wr. width mm	Weight kg	art.no.	€
HSK-A 63	20	49	52.5	80	51	10	36	M8x1	3	1.3	**433409** 6320	225,–
HSK-A 100	32	70	75	100	61	10	51	M8x1	3	3.8	433409 1032	310,–

4132



DIN ISO 7388-1 / DIN 69871 AD/AF

- Internal coolant supply

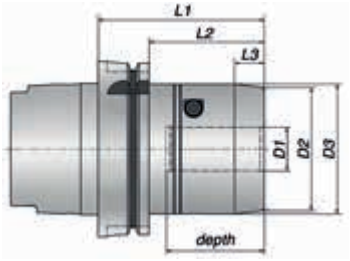
Shank	d1 mm	d2 mm	l1 mm	l2 mm	l3 mm	G mm	Wr. width mm	Weight kg	art.no.	€
SK 40	20	49	64.5	51	10	M16x1	8	1.4	**433411** 4020	209,–
SK 50	32	72	81	61	10	M16x1	8	4.1	433411 5032	295,–

4132

SARA® Hydraulic expansion chuck HYDRO-Grip HD

powered by ETP

- **HSK 63 and ISO 40 pre-balanced to G2.5 / 25,000 rpm**
- **HSK 100 and ISO 50 pre-balanced to G2.5 / 14,000 rpm**
- True running accuracy < 0.004 mm at 2.5 x D
- Tool shank quality h6 or h7
- Also suitable for reducing bushes
- Rigid construction and high clamping force for heavy-duty machining

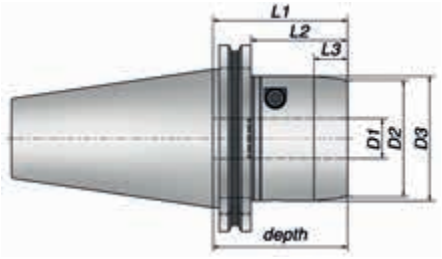


DIN 69893 Form A - HSK-A

- Internal coolant supply
- When machining with inner coolant supply, a coolant transfer pipe Art. No. 431011.... should be used

Shank	D1 mm	D2 mm	D3 mm	L1 mm	L2 mm	L3 mm	Depth mm	art.no.	€
HSK-A 63	20	59	63	96	70	17	52	**433826** 6320	365,–
HSK-A 100	20	59	63	91	62	17	52	433826 1020	487,–
HSK-A 100	25	70	74	95	66	17	56	433826 1025	487,–
HSK-A 100	32	76	80	99	70	17	60	433826 1032	487,–

4130

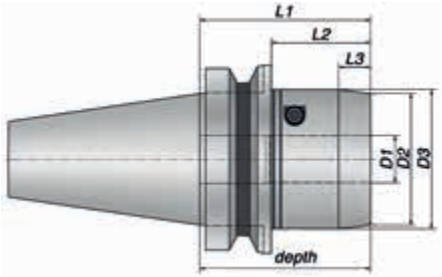


DIN ISO 7388-1 AD (DIN 69871 AD)

- Internal coolant supply

Shank	D1 mm	D2 mm	D3 mm	L1 mm	L2 mm	L3 mm	Depth mm	art.no.	€
SK 40	20	59	63	90	71	17	90	**433806** 4020	322,–
SK 50	20	59	63	68	49	17	68	433806 5020	449,–
SK 50	25	70	74	79	60	17	79	433806 5025	449,–
SK 50	32	76	80	83	64	17	83	433806 5032	449,–

4130



DIN ISO 7388-2 (JIS B 6339)

Shank	D1 mm	D2 mm	D3 mm	L1 mm	L2 mm	L3 mm	Depth mm	art.no.	€
BT 40	20	59	63	79	60	17	79	**433816** 4020	322,–
BT 50	20	59	63	87	50	17	87	433816 5020	449,–
BT 50	25	70	74	91	53	17	91	433816 5025	449,–
BT 50	32	76	80	95	57	17	95	433816 5032	449,–

4130

ATORN® Hydraulic expansion chuck, ultra-slim

Thanks to an innovative production process, the ultra-slim hydraulic expansion chuck combines the benefits of an xpansion chuck and those of a shrink-fit huck in a single product.

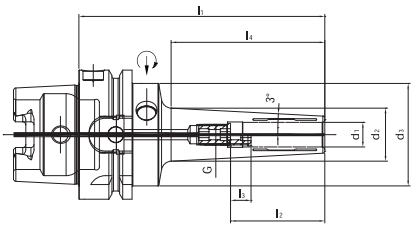
- Exceptionally high clamping forces
- Very high temperature resistance
- **Chuck remains accurate at high temperatures (up to 120 °C)**
- Designed with the slim shape of a shrink-fit huck – suitable for use with tight protruding contours
- Very good damping
- Max. true running accuracy < 0.003 mm
- Tool changes carried out as with an expansion chuck, no need for additional equipment
- Versatile applications with reducing bushes
- **Pre-balanced to G 2.5 at 25,000 rpm**
- With Balluff hip bore

DIN 69893 HSK-A

- Internal coolant supply
- When machining with internal coolant supply, a coolant transfer pipe with art.no. 431011... should be used

Shank	d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	l4 mm	G mm	Wr. width mm	Weight kg	art.no.	€
HSK-A 63	3	9	50	120	28	16	73	M3	1.5	0.9	**433341** 0003	429,–
HSK-A 63	4	10	50	120	28	12	73	M3	1.5	1	433341 0004	429,–
HSK-A 63	5	11	50	120	28	8	73	M3	1.5	1	433341 0005	429,–
HSK-A 63	6	12	50	120	37	10	73	M5	2.5	0.9	433341 6306	398,–
HSK-A 63	8	14	50	120	37	10	74	M6	3	0.9	433341 6308	398,–
HSK-A 63	10	16	50	120	41	10	74	M8x1	3	1	433341 6310	398,–
HSK-A 63	12	18	50	120	46	10	75	M10x1	5	1	433341 6312	398,–
HSK-A 63	6	12	50	160	37	10	113	M5	2.5	1	433341 1606	514,–
HSK-A 63	8	14	50	160	37	10	114	M6	3	1	433341 1608	514,–
HSK-A 63	10	16	50	160	41	10	114	M8x1	3	1	433341 1610	514,–
HSK-A 63	12	18	50	160	46	10	115	M10x1	5	1	433341 1612	514,–
HSK-A 63	6	12	50	200	37	10	153	M5	2.5	1.1	433341 2006	679,–
HSK-A 63	8	14	50	200	37	10	154	M6	3	1.1	433341 2008	679,–
HSK-A 63	10	16	50	200	41	10	154	M8x1	3	1.1	433341 2010	679,–
HSK-A 63	12	18	50	200	46	10	155	M10x1	5	1.1	433341 2012	679,–

4123

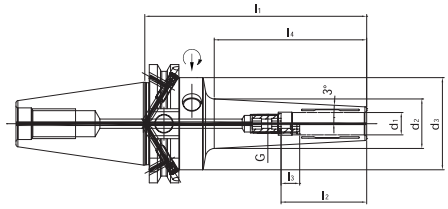


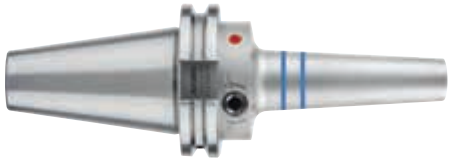
DIN ISO 7388-1 / DIN 69871 AD/AF

- Internal coolant supply

Shank	d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	l4 mm	G mm	Wr. width mm	Weight kg	art.no.	€
SK 40	3	9	49.5	120	28	16	79.5	M3	1.5	1.1	**433340** 0003	411,–
SK 40	4	10	49.5	120	28	12	79.5	M3	1.5	1.2	433340 0004	411,–
SK 40	5	11	49.5	120	28	8	80	M3	1.5	1.2	433340 0005	411,–
SK 40	6	12	49.5	120	37	10	79.9	M5	2.5	1.2	433340 4006	370,–
SK 40	8	14	49.5	120	37	10	79.9	M6	3	1.2	433340 4008	370,–
SK 40	10	16	49.5	120	41	10	80.9	M8x1	3	1.2	433340 4010	370,–
SK 40	12	18	49.5	120	46	10	81.9	M10x1	5	1.2	433340 4012	370,–
SK 40	6	12	49.5	160	37	10	119.9	M5	2.5	1.4	433340 1606	489,–
SK 40	8	14	49.5	160	37	10	119.9	M6	3	1.6	433340 1608	489,–
SK 40	10	16	49.5	160	41	10	120.9	M8x1	3	1.7	433340 1610	489,–
SK 40	12	18	49.5	160	46	10	121.9	M10x1	5	1.7	433340 1612	489,–
SK 40	6	12	49.5	200	37	10	159.9	M5	2.5	1.9	433340 2006	579,–
SK 40	8	14	49.5	200	37	10	159.9	M6	3	2	433340 2008	579,–
SK 40	10	16	49.5	200	41	10	160.9	M8x1	3	2	433340 2010	579,–
SK 40	12	18	49.5	200	46	10	161.9	M10x1	5	2.1	433340 2012	579,–

4123



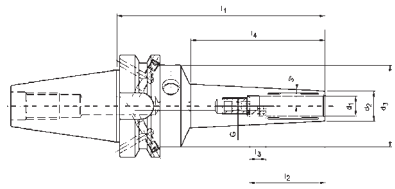


DIN ISO 7388-2 / MAS BT JIS B 6339

- Internal coolant supply

Shank	d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	l4 mm	G mm	Wr. width mm	Weight kg	art.no.	€
BT 40	3	9	49.5	120	28	16	70.5	M3	1.5	1.3	**433342** 4003	439,–
BT 40	4	10	49.5	120	28	12	70.5	M3	1.5	1.3	433342 4004	439,–
BT 40	5	11	49.5	120	28	8	71	M3	1.5	1.3	433342 4005	439,–
BT 40	6	12	49.5	120	37	10	71.9	M5	2.5	1.3	433342 4006	378,–
BT 40	8	14	49.5	120	37	10	72.4	M6	3	1.3	433342 4008	378,–
BT 40	10	16	49.5	120	41	10	72.9	M8x1	3	1.3	433342 4010	378,–
BT 40	12	18	49.5	120	46	10	73.4	M10x1	5	1.3	433342 4012	378,–

4123



SARA® Hydraulic expansion chuck HG PENCIL

powered by ETP

NEW · NUOVO · NY · NOUVEAU · NUEVO

- Extremely slim design
- For boring to finishin
- Allows machining in deep cavities
- True running accuracy < 0.004 mm at 2.5 x D (maximum 50 mm)
- Max. tightening torque 6 Nm
- For tool shanks h6 or h7
- **Pre-balanced to G 2.5 / 25,000 rpm**

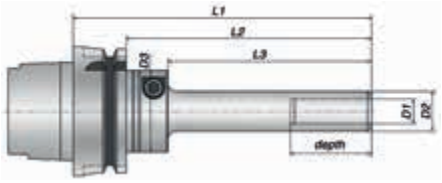


Illustration 1

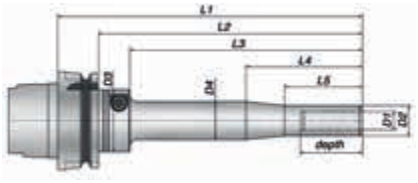


Illustration 2

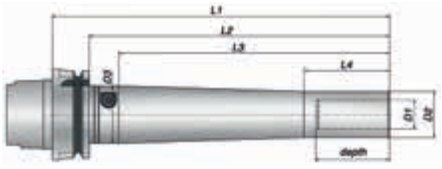


Illustration 3

DIN 69893 Form A - HSK-A

- Internal coolant supply
- When machining with inner coolant supply, a coolant transfer pipe Art. No. 431011.... should be used

Shank	Illustration	D1 mm	D2 mm	D3 mm	D4 mm	L1 mm	L2 mm	L3 mm	L4 mm	L5 mm	Depth mm	art.no.	€
HSK-A 63	1	6	12	40	-	96.5	61	50	-	-	40	**433801** 6006	482,–
HSK-A 63	1	12	19.5	40	-	96.5	61	50	-	-	40	433801 6012	402,–
HSK-A 63	1	12	19.5	40	-	146.5	111	100	-	-	40	433801 6112	434,–
HSK-A 63	2	12	19.5	40	24.5	217	161	150	75	50	40	433801 6212	489,–
HSK-A 63	3	20	32	40	-	156.5	121	110	-	-	52	433801 6020	489,–
HSK-A 63	3	20	32	40	-	257	201	190	-	-	52	433801 6120	568,–
HSK-A 100	1	12	19.5	40	-	96.5	61	50	-	-	40	433801 1012	494,–
HSK-A 100	1	12	19.5	40	-	146.5	111	100	-	-	40	433801 1112	504,–
HSK-A 100	2	12	19.5	40	24.5	217	161	150	75	50	40	433801 1212	566,–
HSK-A 100	3	20	32	40	-	156.5	121	110	-	-	52	433801 1020	566,–
HSK-A 100	3	20	32	40	-	257	201	190	-		52	433801 1120	654,–

4130

Illustration 1

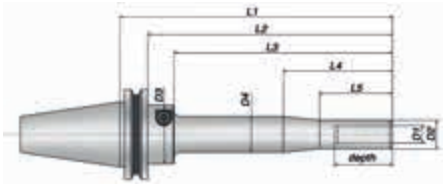


Illustration 2

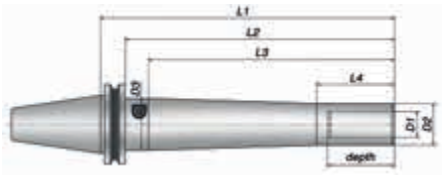


Illustration 3

DIN ISO 7388-1 AD (DIN 69871 AD)

- Internal coolant supply

Shank	Illustration	D1 mm	D2 mm	D3 mm	D4 mm	L1 mm	L2 mm	L3 mm	L4 mm	L5 mm	Depth mm	art.no.	€
SK 40	1	6	12	40	-	87	68	50	-	-	40	**433802** 4006	462,–
SK 40	1	12	19.5	40	-	87	68	50	-	-	40	433802 4012	394,–
SK 40	1	12	19.5	40	-	137	118	100	-	-	40	433802 4112	433,–
SK 40	2	12	19.5	40	24.5	187	168	150	-	50	40	433802 4212	506,–
SK 40	3	20	32	40	-	147	128	110	60	-	52	433802 4020	430,–
SK 40	3	20	32	40	-	227	208	190	60	-	52	433802 4120	521,–
SK 50	1	12	19.5	40	-	87	68	50	-	-	40	433802 5012	467,–
SK 50	1	12	19.5	40	-	137	118	100	-	-	40	433802 5112	512,–
SK 50	2	12	19.5	40	24.5	187	168	150	75	50	40	433802 5212	605,–
SK 50	3	20	32	40	-	147	128	110	-	-	52	433802 5020	519,–
SK 50	3	20	32	40	-	227	208	190	-	-	52	433802 5120	614,–

4130

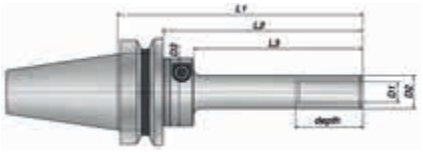


Illustration 1

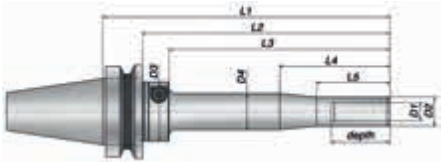


Illustration 2

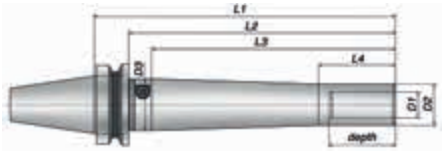


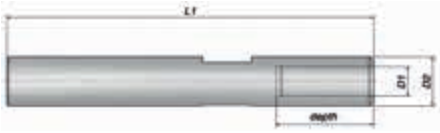
Illustration 3

DIN ISO 7388-2 (JIS B 6339)

- Internal coolant supply

Shank	Illustration	D1 mm	D2 mm	D3 mm	D4 mm	L1 mm	L2 mm	L3 mm	L4 mm	L5 mm	Depth mm	art.no.	€
BT 40	1	6	12	40	-	95	68	50	-	-	40	**433803** 4006	462,–
BT 40	1	12	19.5	40	-	95	68	50	-	-	40	433803 4012	394,–
BT 40	1	12	19.5	40	-	145	118	100	-	-	40	433803 4112	433,–
BT 40	2	12	19.5	40	24.5	195	168	150	75	50	40	433803 4212	506,–
BT 40	3	20	32	40	-	155	128	110	60	-	52	433803 4020	430,–
BT 40	3	20	32	40	-	235	208	190	60	-	52	433803 4120	521,–
BT 50	1	12	19.5	40	-	106	68	50	-	-	40	433803 5012	467,–
BT 50	1	12	19.5	40	-	156	118	100	-	-	40	433803 5112	512,–
BT 50	2	12	19.5	40	24.5	206	168	150	75	50	40	433803 5212	605,–
BT 50	3	20	32	40	-	166	128	110	60	-	52	433803 5020	519,–
BT 50	3	20	32	40	-	246	206.5	190	60	-	52	433803 5120	614,–

4130

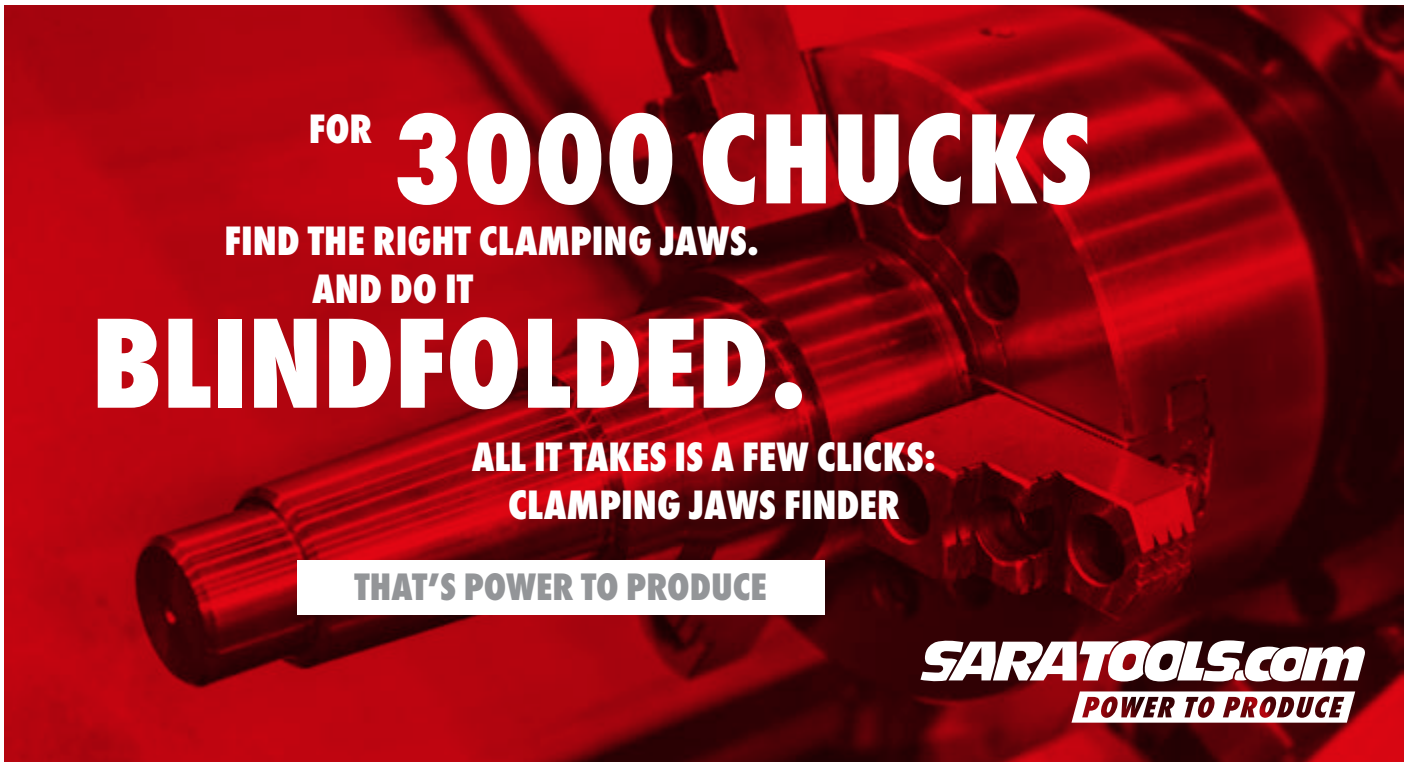


Straight shank

- Internal coolant supply

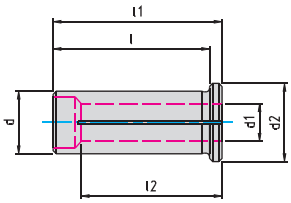
D1 mm	D2 mm	L1 mm	Clamping depth mm	art.no.	€
12	20	150	40	**433811** 2012	485,–

4130



Reducing bushes

- **Slotted**
- **Mechanically sealed up to max. 80 bar**
- Suitable for hydraulic expansion chucks and power chucks
- **Seal only suitable for hydraulic expansion chucks**
- Without dirt groove
- For reducing clamping ranges
- For drilling, reaming and milling
- True running accuracy < 3 µm (at 2.5 x d)
- **Version with coolant bores available on request**



For chuck diameter 12 mm

d mm	d1 mm	d2 mm	l mm	l1 mm	l2 mm	art.no.	€
12	3	16	40	44	29	**433413** 0003	103,–
12	4	16	40	44	29	433413 0004	103,–
12	5	16	40	44	29	433413 0005	103,–
12	6	16	40	44	36	433413 0006	103,–
12	8	16	40	44	37	433413 0008	103,–
12	10	16	40	44	40	433413 0010	112,–

4123

For chuck diameter 20 mm

d mm	d1 mm	d2 mm	l mm	l1 mm	l2 mm	art.no.	€
20	3	25	50	54	28	**433421** 0003	96,–
20	4	25	50	54	28	433421 0004	96,–
20	5	25	50	54	28	433421 0005	96,–
20	6	25	50	54	36	433421 0006	73,–
20	8	25	50	54	37	433421 0008	75,–
20	10	25	50	54	40	433421 0010	75,–
20	12	25	50	54	45	433421 0012	75,–
20	14	25	50	54	45	433421 0014	75,–
20	16	25	50	54	48	433421 0016	75,–

4123

For chuck diameter 32 mm

d mm	d1 mm	d2 mm	l mm	l1 mm	l2 mm	art.no.	€
32	6	36	60	64	36	**433434** 0006	96,–
32	8	36	60	64	36	433434 0008	96,–
32	10	36	60	64	40	433434 0010	96,–
32	12	36	60	64	45	433434 0012	96,–
32	14	36	60	64	46	433434 0014	96,–
32	16	36	60	64	48	433434 0016	96,–
32	18	36	60	64	49	433434 0018	96,–
32	20	36	60	64	50	433434 0020	96,–
32	25	36	60	64	56	433434 0025	96,–

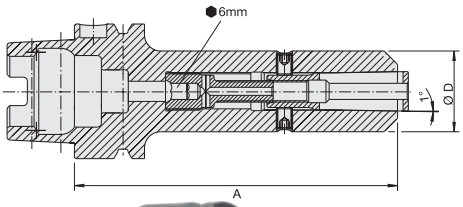
4123

… 3 µm

ATORN®
High quality for great performance

HAIMER® High-precision chuck HG

- Straight shank tools clamped with a high level precision using HG collets
- Very well suited to high-speed machining
- Taper angle tolerance quality AT3
- Finely balanced to G 2.5 at 25,000 rpm
- **True-running accuracy: 3 µm**
- Supplied with clamping screw and pull-out hook, no collet

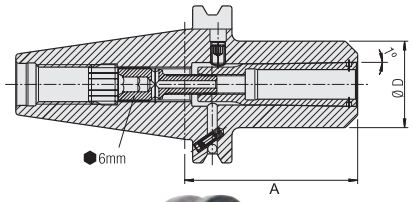


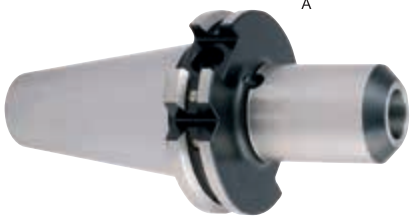
DIN 69893-1 HSK-A

- Internal coolant supply
- When machining with internal coolant supply, a coolant transfer pipe with art.no. 431011... should be used

Shank	Design	D mm	A mm	Designation	Clamp Ø mm	art.no.	€
HSK 63	Short	30	120	1	2 / 3 / 4 / 5 / 6 / 8	**431219** 6301	190,–
HSK 63	Short	35	120	2	10 / 12 / 14	431219 6302	190,–
HSK 63	Short	48	120	3	16 / 18 / 20	431219 6303	190,–
HSK 63	Extra-long	30	160	1	2 / 3 / 4 / 5 / 6 / 8	431219 6311	235,–
HSK 63	Extra-long	35	160	2	10 / 12 / 14	431219 6312	243,–
HSK 63	Extra-long	48	160	3	16 / 18 / 20	431219 6313	249,–

4165



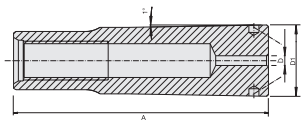


DIN ISO 7388-1 / DIN 69871 AD

- Internal coolant supply

Shank	Design	D mm	A mm	Designation	Clamp Ø mm	art.no.	€
SK 40	Short	30	65	HG 01	2 / 3 / 4 / 5 / 6 / 8	**431213** 4001	130,–
SK 40	Short	35	70	HG 02	10 / 12 / 14	431213 4002	130,–
SK 40	Short	48	75	HG 03	16 / 18 / 20	431213 4003	130,–
SK 40	Lang	30	100	HG 01	2 / 3 / 4 / 5 / 6 / 8	431213 4101	149,–
SK 40	Lang	35	100	HG 02	10 / 12 / 14	431213 4102	149,–
SK 40	Lang	48	100	HG 03	16 / 18 / 20	431213 4103	149,–

4165



HG collets

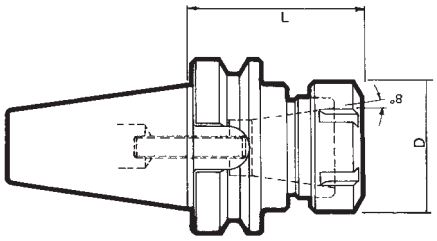
- **Clamp straight shank tools in HG chucks with a high level of precision**
- Further sizes available on request

suitable for	D mm	D1 mm	L mm	art.no.	€
HG 01	2	14.7	52.5	**431220** 1020	121,–
HG 01	3	14.7	52.5	431220 1030	121,–
HG 01	4	14.7	52.5	431220 1040	121,–
HG 01	5	14.7	52.5	431220 1050	77,–
HG 01	6	14.7	52.5	431220 1060	77,–
HG 01	8	14.7	52.5	431220 1080	77,–
HG 02	10	17.87	64.2	431220 2100	77,–
HG 02	12	17.87	64.2	431220 2120	77,–
HG 02	14	17.87	64.2	431220 2140	77,–
HG 03	16	26.15	69.7	431220 3160	77,–
HG 03	18	26.15	69.7	431220 3180	77,–
HG 03	20	26.15	69.7	431220 3200	77,–

4165

ATORN® ER collet chuck with planar support

- **Pre-balanced G6.3 / 25,000 rpm**
- Taper angle tolerance quality < AT3 in accordance with DIN 7187
- Max. true running accuracy < 0.005 mm
- Internal coolant supply
- Case hardened to HRc 60 ± 2



DIN ISO 7388-1 AD (DIN69871 AD)

- Internal coolant supply

Shank	Clamping range mm	for collets	D mm	L mm	art.no.	€
SK 40	1 - 10	ER16	28	70	**431203** 4016	140,–
SK 40	2 - 16	ER25	42	70	431203 4025	140,–
SK 40	2 - 20	ER32	50	70	431203 4032	140,–
SK 40	3 - 26	ER40	63	70	431203 4040	165,–
SK 40	1 - 10	ER16	28	100	431203 4116	150,–
SK 40	2 - 16	ER25	42	100	431203 4125	150,–
SK 40	2 - 20	ER32	50	100	431203 4132	150,–
SK 40	3 - 26	ER40	63	100	431203 4140	175,–
SK 50	1 - 10	ER16	28	80	431203 5016	190,–
SK 50	2 - 16	ER25	42	80	431203 5025	190,–
SK 50	2 - 20	ER32	50	80	431203 5032	190,–
SK 50	3 - 26	ER40	63	80	431203 5040	215,–
SK 50	1 - 10	ER16	28	100	431203 5116	210,–
SK 50	2 - 16	ER25	42	100	431203 5125	210,–
SK 50	2 - 20	ER32	50	100	431203 5132	210,–
SK 50	3 - 26	ER40	63	100	431203 5140	235,–

4117

DIN ISO 7388-2 (JIS B 6339)

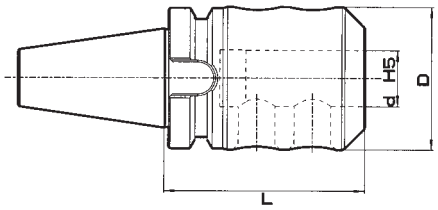
- Internal coolant supply

Shank	Clamping range mm	for collets	D mm	L mm	art.no.	€
BT 30	1 - 10	ER16	28	70	**431107** 3016	111,–
BT 30	2 - 16	ER25	42	70	431107 3025	111,–
BT 30	2 - 20	ER32	50	70	431107 3032	111,–
BT 40	1 - 10	ER16	28	70	431107 4016	140,–
BT 40	2 - 16	ER25	42	70	431107 4025	140,–
BT 40	2 - 20	ER32	50	70	431107 4032	140,–
BT 40	3 - 26	ER40	63	70	431107 4040	165,–
BT 40	1 - 10	ER16	28	100	431107 4116	150,–
BT 40	2 - 16	ER25	42	100	431107 4125	150,–
BT 40	2 - 20	ER32	50	100	431107 4132	150,–
BT 40	3 - 26	ER40	63	100	431107 4140	175,–
BT 50	1 - 10	ER16	28	80	431107 5016	190,–
BT 50	2 - 16	ER25	42	80	431107 5025	190,–
BT 50	2 - 20	ER32	50	80	431107 5032	190,–
BT 50	3 - 26	ER40	63	80	431107 5040	215,–
BT 50	1 - 10	ER16	28	100	431107 5116	210,–
BT 50	2 - 16	ER25	42	100	431107 5125	210,–
BT 50	2 - 20	ER32	50	100	431107 5132	210,–
BT 50	3 - 26	ER40	63	100	431107 5140	235,–

4117

ATORN® Milling cutter mount DIN6359 (Weldon) with planar support

- **Pre-balanced G6.3 / 25,000 rpm**
- Taper angle tolerance quality < AT3 in accordance with DIN 7187
- Max. true running accuracy < 0.005 mm
- Internal coolant supply
- Case hardened to HRc 60 ± 2



DIN ISO 7388-1 AD (DIN 69871 AD)

- Internal coolant supply

Shank	d mm	D mm	L mm	art.no.	€
SK 40	6	25	50	**434603** 4006	125,–
SK 40	8	28	50	434603 4008	120,–
SK 40	10	35	50	434603 4010	120,–
SK 40	12	42	50	434603 4012	120,–
SK 40	16	48	63	434603 4016	120,–
SK 40	20	52	63	434603 4020	120,–
SK 40	25	64	100	434603 4025	160,–
SK 40	32	72	100	434603 4032	160,–
SK 50	6	25	63	434603 5006	185,–
SK 50	8	28	63	434603 5008	180,–
SK 50	10	35	63	434603 5010	180,–
SK 50	12	42	63	434603 5012	180,–
SK 50	16	48	63	434603 5016	180,–
SK 50	20	52	63	434603 5020	180,–
SK 50	25	64	80	434603 5025	205,–
SK 50	32	72	100	434603 5032	205,–

4117

DIN ISO 7388-2 (JIS B 6339)

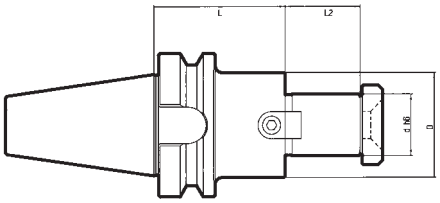
- Internal coolant supply

Shank	d mm	D mm	L mm	art.no.	€
BT 30	6	25	60	**434607** 3006	86,–
BT 30	8	28	60	434607 3008	86,–
BT 30	10	35	60	434607 3010	86,–
BT 30	12	42	60	434607 3012	86,–
BT 30	16	48	75	434607 3016	106,–
BT 30	20	52	75	434607 3020	106,–
BT 30	25	64	90	434607 3032	135,–
BT 40	6	25	50	434607 4006	125,–
BT 40	8	28	50	434607 4008	120,–
BT 40	10	35	63	434607 4010	120,–
BT 40	12	42	63	434607 4012	120,–
BT 40	16	48	63	434607 4016	120,–
BT 40	20	52	63	434607 4020	120,–
BT 40	25	64	100	434607 4025	160,–
BT 40	32	72	100	434607 4032	160,–
BT 50	6	25	63	434607 5006	185,–
BT 50	8	28	63	434607 5008	180,–
BT 50	10	35	63	434607 5010	180,–
BT 50	12	42	80	434607 5012	180,–
BT 50	16	48	80	434607 5016	180,–
BT 50	20	52	80	434607 5020	180,–
BT 50	25	64	100	434607 5025	205,–
BT 50	32	72	105	434607 5032	205,–

4117

ATORN® Transverse slot shell-type milling cutter arbour with planar support

- **Pre-balanced G6.3 / 25,000 rpm**
- Taper angle tolerance quality < AT3 in accordance with DIN 7187
- Max. true running accuracy < 0.005 mm
- Internal coolant supply
- Case hardened to HRc 60 ± 2



DIN ISO 7388-1 AD (DIN 69871 AD)

- Internal coolant supply

Shank	d mm	D mm	L mm	L2 mm	art.no.	€
SK 40	16	38	45	17	**435403** 4016	130,–
SK 40	22	50	45	19	435403 4022	130,–
SK 40	27	60	50	21	435403 4027	130,–
SK 40	32	78	55	24	435403 4032	130,–
SK 50	16	38	45	17	435403 5016	150,–
SK 50	22	50	60	19	435403 5022	150,–
SK 50	27	60	60	21	435403 5027	150,–
SK 50	32	78	50	24	435403 5032	150,–

4117

DIN ISO 7388-2 (JIS B 6339)

- Internal coolant supply

Shank	d mm	D mm	L mm	L2 mm	art.no.	€
BT 30	16	38	35	17	**435407** 3016	108,–
BT 30	22	50	45	19	435407 3022	108,–
BT 30	27	60	45	21	435407 3027	108,–
BT 40	16	38	45	17	435407 4016	130,–
BT 40	22	50	45	19	435407 4022	130,–
BT 40	27	60	45	21	435407 4027	130,–
BT 40	32	78	60	24	435407 4032	130,–
BT 50	16	38	60	17	435407 5016	150,–
BT 50	22	50	60	19	435407 5022	150,–
BT 50	27	60	60	21	435407 5027	150,–
BT 50	32	78	60	24	435407 5032	150,–

4117

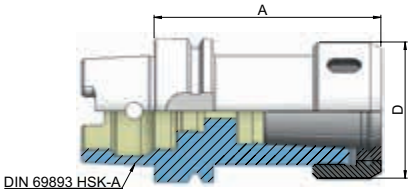
Solid carbide extension

SARA®

page 1145

SARA® OZ collet chuck

DIN 6391



- **For DIN 6388 collets**
- **Pre-balanced to G 2.5 / 25,000 rpm**
- Alloyed case-hardened steel with a core tensile strength of min. 950 N/mm²
- case-hardened to HRc 60 ± 2 (HV 700 ± 50), case depth 0.8 mm ± 0.2 mm, burnished
- Taper angle tolerance quality < AT3 in accordance with DIN 7187 and DIN 2080, max. true running accuracy < 0.005 mm
- Supplied with clamping nut
- **Additional shank designs and AD/AF versions available on request**
- **Suitable hook spanner under Article No. 701550....**

DIN 69893 type A (HSK-A)

- Internal coolant supply
- When machining with internal coolant supply, a coolant transfer pipe with art.no. 431011... should be used

Shank	Clamping range mm	for collets	A mm	D mm	art.no.	€
HSK-A 50	2 - 16	410E / 415E	100	43	**431509** 5016	93,50
HSK-A 50	2 - 25	444E / 462E	100	60	431509 5025	93,50
HSK-A 63	2 - 16	410E / 415E	100	43	431509 6316	98,50
HSK-A 63	2 - 25	444E / 462E	100	60	431509 6325	98,50
HSK-A 63	3 - 32	450E / 467E	120	72	431509 6332	104,–
HSK-A 100	2 - 16	410E / 415E	110	43	431509 1016	132,–
HSK-A 100	2 - 25	444E / 462E	120	60	431509 1025	132,–
HSK-A 100	3 - 32	450E / 467E	130	72	431509 1032	142,–

4117

DIN ISO 7388-1 / DIN 69871 AD

- Internal coolant supply

Shank	Clamping range mm	for collets	A mm	D mm	art.no.	€
SK 40	2 - 16	410E / 415E	70	43	**431503** 4016	58,–
SK 40	2 - 16	410E / 415E	100	43	431503 4116	72,–
SK 40	2 - 25	444E / 462E	70	60	431503 4025	62,–
SK 40	2 - 25	444E / 462E	100	60	431503 4125	75,–
SK 40	3 - 32	450E / 467E	90	72	431503 4032	65,–
SK 50	2 - 25	444E / 462E	70	60	431503 5025	81,–
SK 50	3 - 32	450E / 467E	80	72	431503 5032	85,50
SK 50	3 - 32	450E / 467E	100	72	431503 5132	100,–

4117

DIN ISO 7388-2 / MAS BT JIS B 6339

- Internal coolant supply

Shank	Clamping range mm	for collets	A mm	D mm	art.no.	€
SK 40	2 - 16	410E / 415E	70	43	**431507** 4016	58,–
SK 40	2 - 25	444E / 462E	70	60	431507 4025	62,–
SK 40	3 - 32	450E / 467E	90	72	431507 4032	65,–
SK 50	2 - 25	444E / 462E	85	60	431507 5025	81,–
SK 50	3 - 32	450E / 467E	90	72	431507 5032	85,50

4117

DIN 2080

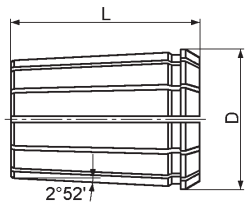
Shank	Clamping range mm	for collets	A mm	D mm	art.no.	€
SK 40	2 - 16	410E / 415E	55	43	**431501** 4016	57,–
SK 40	2 - 25	444E / 462E	66	60	431501 4025	61,–
SK 40	3 - 32	450E / 467E	95	72	431501 4032	65,–
SK 50	2 - 25	444E / 462E	71	60	431501 5025	80,–
SK 50	3 - 32	450E / 467E	73	72	431501 5032	84,–

4117

FAHRION® PRÄZISION OZ collets

DIN 6388-B

- Exceptionally fl xible double-slotted version
- Higher contact area ratio, increased rigidity and holding forces, greater system concentricity
- Collapse 0.5 mm
- For clamping tools and twist drill bits on the chamfer
- True-running accuracy:
  415E: 6 µm
  462E: 6 µm
  467E: 10 µm

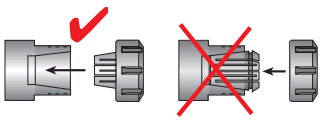


Clamp Ø mm	415E L = 40 mm D = 25,5 mm art.no.	€	462E L = 52 mm D = 35,05 mm art.no.	€	467E L = 60 mm D = 43,7 mm art.no.	€
2	**433015** 0020	31,55	**433016** 0020	35,65		
2.5	433015 0025	36,65	433016 0025	40,70		
3	433015 0030	22,40	433016 0030	26,35		
3.5	433015 0035	28,–	433016 0035	32,–		
4	433015 0040	22,40	433016 0040	26,35	**433017** 0040	48,35
4.5	433015 0045	28,–	433016 0045	32,–	433017 0045	57,80
5	433015 0050	22,40	433016 0050	26,35	433017 0050	34,10
5.5	433015 0055	28,–	433016 0055	32,–	433017 0055	44,20
6	433015 0060	22,40	433016 0060	26,35	433017 0060	34,10
6.5	433015 0065	28,–	433016 0065	32,–	433017 0065	44,20
7	433015 0070	22,40	433016 0070	26,35	433017 0070	34,10
7.5	433015 0075	28,–	433016 0075	32,–	433017 0075	44,20
8	433015 0080	22,40	433016 0080	26,35	433017 0080	34,10
8.5	433015 0085	28,–	433016 0085	32,–	433017 0085	44,20
9	433015 0090	22,40	433016 0090	26,35	433017 0090	34,10
9.5	433015 0095	28,–	433016 0095	32,–	433017 0095	44,20
10	433015 0100	22,40	433016 0100	26,35	433017 0100	34,10
10.5	433015 0105	28,–	433016 0105	32,–	433017 0105	44,20
11	433015 0110	22,40	433016 0110	26,35	433017 0110	34,10
11.5	433015 0115	28,–	433016 0115	32,–	433017 0115	44,20
12	433015 0120	22,40	433016 0120	26,35	433017 0120	34,10
12.5	433015 0125	28,–	433016 0125	32,–	433017 0125	44,20
	4119		4119		4119	

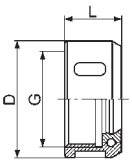
Clamp Ø mm	415E L = 40 mm D = 25,5 mm art.no.	€	462E L = 52 mm D = 35,05 mm art.no.	€	467E L = 60 mm D = 43,7 mm art.no.	€
13	433015 0130	22,40	433016 0130	26,35	433017 0130	34,10
13.5	433015 0135	28,–	433016 0135	32,–	433017 0135	44,20
14	433015 0140	22,40	433016 0140	26,35	433017 0140	34,10
14.5	433015 0145	28,–	433016 0145	32,–	433017 0145	44,20
15	433015 0150	22,40	433016 0150	26,35	433017 0150	34,10
15.5	433015 0155	28,–	433016 0155	32,–	433017 0155	44,20
16	433015 0160	22,40	433016 0160	26,35	433017 0160	34,10
17			433016 0170	26,35	433017 0170	34,10
18			433016 0180	26,35	433017 0180	34,10
20			433016 0200	26,35	433017 0200	34,10
21			433016 0210	26,35	433017 0210	34,10
22			433016 0220	26,35	433017 0220	34,10
23			433016 0230	26,35	433017 0230	34,10
24			433016 0240	26,35	433017 0240	34,10
25			433016 0250	26,35	433017 0250	34,10
26					433017 0260	34,10
27					433017 0270	34,10
28					433017 0280	34,10
29					433017 0290	34,10
30					433017 0300	34,10
31					433017 0310	34,10
32					433017 0320	34,10
	4119		4119		4119	

OZ clamping nuts

- **For collets in accordance with DIN 6388 (OZ)**
- With ball bearing-mounted pressure ring
- For higher holding forces and better concentricity
- **Suitable hook spanner under Article No. 701550....**



suitable for	Clamping range mm	D mm	L mm	Thread	art.no.	€
410E/415E	2 - 16	43	24	M33 x 1.5	**431014** 0216	36,80
444E/462E	2 - 25	60	30	M48 x 2.0	431014 0225	42,10
450E/467E	3 - 32	72	33.5	M60 x 2.5	431014 0332	49,60
					4120	

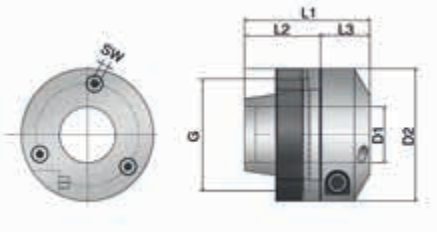


SARA® Hydraulic expansion clamping unit ECOGRIP ER

powered by ETP

NEU · NEW · NUOVO · NY · NOUVEAU · NUEVO

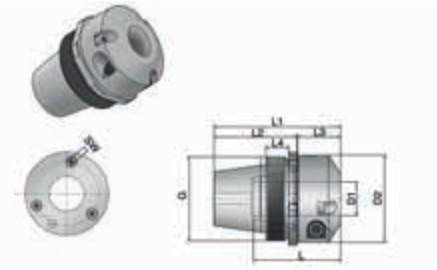
- Renders ER collet systems hydraulic
- Adjustable concentricity
- For ER collet systems with external thread
- For powered tools with internal thread
- Installed correctly, a true running accuracy of 0.02 mm is achieved. The concentricity can be further adjusted to the desired accuracy by slightly tightening the setting screws.



ECOGRIP ER for male thread

Designation	D1 mm	D2 mm	L1 mm	L2 mm	L3 mm	Thread	Wr. width mm	art.no.	€
ER16	6	34	30	16	14	M22 x 1.5	2.5	**433804** 1006	223,–
ER16 Mini	6	34	30	16	14	M19 x 1	2.5	433804 1106	252,–
ER20	12	43.5	40	16	24	M25 x 1.5	3	433804 2012	188,–
ER20 Mini	12	43.5	40	16	24	M24 x 1	3	433804 2112	217,–
ER25	12	48	46	20	26	M32 x 1.5	3	433804 3012	242,–
ER25	16	48	46	20	26	M32 x 1.5	3	433804 3016	213,–
ER32	20	52	52	26.5	25.5	M40 x 1.5	3	433804 4020	213,–
ER40	25	59	56	34	22	M50 x 1.5	3	433804 5020	237,–

4130



ECOGRIP ER for female thread

Designation	D1 mm	D2 mm	L mm	L1 mm	L2 mm	L3 mm	L4 mm	Thread	Wr. width mm	art.no.	€
ER20	12	16	40	60.5	36	24	10	M32 x 1.5	3	**433814** 2512	279,–
ER25	12	16	46	71	44.5	26	12	M40 x 1.5	3	433814 3212	279,–
ER25	16	16	46	71	44.5	26	12	M40 x 1.5	3	433814 3216	279,–
ER32	20	22	52	75.5	49.5	25.5	13.5	M50 x 1.5	3	433814 4020	316,–

4130

Transverse slot shell-type arbour

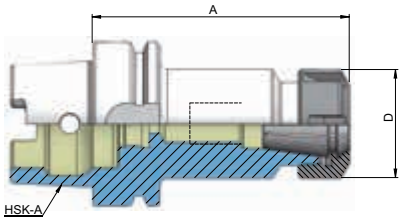
SARA®

pre-balanced to G2.5 at 25,000 rpm

page 1120

SARA® ER collet chuck

- **For DIN 6499 ER collets**
- **Pre-balanced to G 2.5 / 25,000 rpm**
- Alloyed case-hardened steel with a core tensile strength of min. 950 N/mm², case-hardened to HRc 60 ± 2 (HV 700 ± 50), case depth 0.8 mm ± 0.2 mm, burnished
- Taper angle tolerance quality < AT3 in accordance with DIN 7187 and DIN 2080, max. true running accuracy < 0.005 mm
- Supplied with clamping nut
- **Additional shank designs and AD/AF version available on request**
- **ER16 / 426E* tool holding fixtu es supplied with hexagonal nut**



DIN 69893 type A (HSK-A)

- Internal coolant supply
- When machining with internal coolant supply, a coolant transfer pipe with art.no. 431011... should be used

Shank	Clamping range mm	for collets	A mm	D mm	art.no.	€
HSK-A 50	1 - 10	ER16 / 426E *	100	32	**431009** 5010	85,50
HSK-A 50	2 - 16	ER25 / 430E	100	42	431009 5016	85,50
HSK-A 50	2 - 20	ER32 / 470E	100	50	431009 5020	90,50
HSK-A 63	1 - 10	ER16 / 426E *	100	32	431009 6310	85,50
HSK-A 63	1 - 10	ER16 / 426E *	160	32	431009 6410	111,–
HSK-A 63	2 - 16	ER25 / 430E	100	42	431009 6316	82,–
HSK-A 63	2 - 16	ER25 / 430E	160	42	431009 6416	108,–
HSK-A 63	2 - 20	ER32 / 470E	100	50	431009 6320	85,50
HSK-A 63	2 - 20	ER32 / 470E	160	50	431009 6420	111,–
HSK-A 63	3 - 26	ER40 / 472E	120	63	431009 6326	90,50
HSK-A 100	2 - 16	ER25 / 430E	100	42	431009 1016	114,–
HSK-A 100	2 - 20	ER32 / 470E	100	50	431009 1020	114,–
HSK-A 100	3 - 26	ER40 / 472E	120	63	431009 1026	119,–

4117

DIN ISO 7388-1 / DIN 69871 AD

- Internal coolant supply

Shank	Clamping range mm	for collets	A mm	D mm	art.no.	€
SK 40	1 - 10	ER16 / 426E *	63	32	**431003** 4010	46,–
SK 40	1 - 10	ER16 / 426E *	100	32	431003 4110	53,–
SK 40	1 - 10	ER16 / 426E *	160	32	431003 4210	87,50
SK 40	2 - 16	ER25 / 430E	60	42	431003 4016	46,–
SK 40	2 - 16	ER25 / 430E	100	42	431003 4116	59,–
SK 40	2 - 16	ER25 / 430E	160	42	431003 4216	87,50
SK 40	2 - 20	ER32 / 470E	70	50	431003 4020	49,–
SK 40	2 - 20	ER32 / 470E	100	50	431003 4120	59,–
SK 40	2 - 20	ER32 / 470E	160	50	431003 4220	89,50
SK 40	3 - 26	ER40 / 472E	80	63	431003 4026	52,–
SK 40	3 - 26	ER40 / 472E	100	63	431003 4126	65,–
SK 40	3 - 26	ER40 / 472E	160	63	431003 4226	95,50
SK 50	1 - 10	ER16 / 426E	100	32	431003 5010	87,50
SK 50	1 - 10	ER16 / 426E	160	32	431003 5210	120,–
SK 50	2 - 16	ER25 / 430E	60	42	431003 5016	72,–
SK 50	2 - 16	ER25 / 430E	100	42	431003 5116	87,50
SK 50	2 - 16	ER25 / 430E	160	42	431003 5216	120,–
SK 50	2 - 20	ER32 / 470E	70	50	431003 5020	75,–
SK 50	2 - 20	ER32 / 470E	100	50	431003 5120	104,–
SK 50	2 - 20	ER32 / 470E	160	50	431003 5220	120,–
SK 50	2 - 20	ER32 / 470E	200	50	431003 5230	161,–
SK 50	3 - 26	ER40 / 472E	80	63	431003 5026	75,–
SK 50	3 - 26	ER40 / 472E	100	63	431003 5126	107,–
SK 50	3 - 26	ER40 / 472E	160	63	431003 5226	123,–
SK 50	3 - 26	ER40 / 472E	200	63	431003 5326	167,–

4117

DIN ISO 7388-2 / MAS BT JIS B 6339

- Internal coolant supply

Shank	Clamping range mm	for collets	A mm	D mm	art.no.	€
SK 40	1 - 10	ER16 / 426E *	63	32	**431007** 4010	46,–
SK 40	1 - 10	ER16 / 426E *	100	32	431007 4110	53,–
SK 40	2 - 16	ER25 / 430E	60	42	431007 4016	46,–
SK 40	2 - 16	ER25 / 430E	100	42	431007 4116	66,–
SK 40	2 - 20	ER32 / 470E	70	50	431007 4020	49,–
SK 40	2 - 20	ER32 / 470E	100	50	431007 4120	59,–
SK 40	3 - 26	ER40 / 472E	80	63	431007 4026	52,–
SK 40	3 - 26	ER40 / 472E	100	63	431007 4126	65,–
SK 50	2 - 16	ER25 / 230E	70	42	431007 5016	79,–
SK 50	2 - 20	ER32 / 470E	70	50	431007 5020	75,–
SK 50	3 - 26	ER40 / 472E	80	63	431007 5026	75,–

4117

DIN 2080

Shank	Clamping range mm	for collets	A mm	D mm	art.no.	€
SK 40	1 - 10	ER16 / 426E *	50	32	**431001** 4010	46,–
SK 40	2 - 16	ER25 / 430E	50	42	431001 4016	46,–
SK 40	2 - 20	ER32 / 470E	50	50	431001 4020	48,–
SK 40	3 - 26	ER40 / 472E	80	63	431001 4026	51,–
SK 50	2 - 20	ER32 / 470E	63	50	431001 5020	74,–
SK 50	3 - 26	ER40 / 472E	63	63	431001 5026	74,–

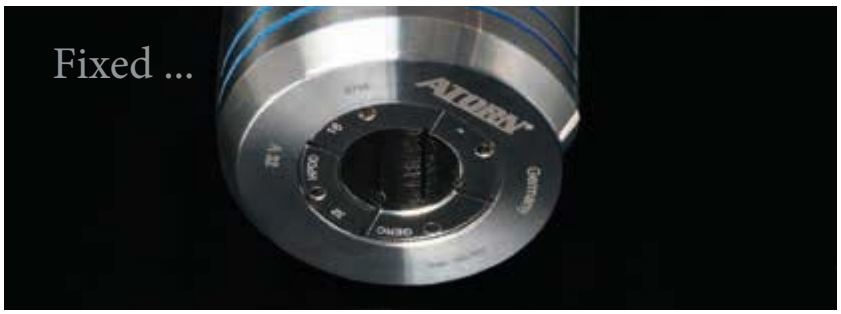
4117

With straight shank

- True running accuracy < 15 µm

D1 mm	Clamping range mm	for collets	L1 mm	L mm	D mm	art.no.	€
20	1.5 - 16	ER25	50	46	42	**431016** 2001	102,–
20	1.5 - 16	ER25	100	46	42	431016 2002	108,–
20	2 - 20	ER32	100	54	50	431016 2003	174,–
25	1 - 16	ER25	50	40	42	431016 2501	108,–
25	1 - 16	ER25	100	40	42	431016 2502	108,–
25	2 - 20	ER32	50	52	50	431016 2503	174,–
32	2 - 20	ER32	50	48	50	431016 3202	143,–
32	2 - 20	ER32	100	48	50	431016 3212	133,–
32	3 - 26	ER40	70	60	63	431016 3203	184,–
40	2 - 20	ER32	80	33	50	431016 4001	184,–

4120



ATORN® ER precision collets 2 µm

- True running accuracy 2 µm
- For greater system concentricity
- Collapse h10
- Also suitable for ATORN precision ER collet chuck and Fahrion Centro P
- **Sets available on request**

Clamp Ø mm	ER16UP/426E D = 17 mm L = 27,5 mm		ER25UP/430E D = 26 mm L = 34 mm		ER32UP/470E D = 33 mm L = 40 mm		ER40UP/472E D = 41 mm L = 46 mm	
	art.no.	€	art.no.	€	art.no.	€	art.no.	€
1	**433621** 0010	51,–	**433622** 0010	43,–				
1.5	433621 0015	51,–	433622 0015	43,–				
2	433621 0020	40,50	433622 0020	42,50	**433623** 0020	43,–		
2.5	433621 0025	40,50	433622 0025	42,50	433623 0025	43,–		
3	433621 0030	35,20	433622 0030	36,–	433623 0030	36,70	**433624** 0030	57,–
3.5	433621 0035	48,–	433622 0035	48,–	433623 0035	48,80	433624 0035	64,80
4	433621 0040	35,20	433622 0040	36,–	433623 0040	36,70	433624 0040	51,20
4.5	433621 0045	48,–	433622 0045	48,–	433623 0045	48,80	433624 0045	64,80
5	433621 0050	35,20	433622 0050	36,–	433623 0050	36,70	433624 0050	51,20
5.5	433621 0055	48,–	433622 0055	48,–	433623 0055	48,80	433624 0055	64,80
6	433621 0060	35,20	433622 0060	36,–	433623 0060	36,70	433624 0060	51,20
6.5	433621 0065	48,–	433622 0065	48,–	433623 0065	48,80	433624 0065	64,80
7	433621 0070	35,20	433622 0070	36,–	433623 0070	36,70	433624 0070	51,20
7.5	433621 0075	48,–	433622 0075	48,–	433623 0075	48,80	433624 0075	64,80
8	433621 0080	35,20	433622 0080	36,–	433623 0080	36,70	433624 0080	51,20
8.5	433621 0085	48,–	433622 0085	48,–	433623 0085	48,80	433624 0085	64,80
9	433621 0090	35,20	433622 0090	36,–	433623 0090	36,70	433624 0090	51,20
9.5	433621 0095	48,–	433622 0095	48,–	433623 0095	48,80	433624 0095	64,80
10	433621 0100	35,20	433622 0100	36,–	433623 0100	36,70	433624 0100	51,20
10.5			433622 0105	48,–	433623 0105	48,80	433624 0105	64,80
11			433622 0110	36,–	433623 0110	36,70	433624 0110	51,20
11.5			433622 0115	48,–	433623 0115	48,80	433624 0115	64,80
12			433622 0120	36,–	433623 0120	36,70	433624 0120	51,20
12.5			433622 0125	48,–	433623 0125	48,80	433624 0125	64,80
13			433622 0130	36,–	433623 0130	36,70	433624 0130	51,20
13.5			433622 0135	48,–	433623 0135	48,80	433624 0135	64,80
14			433622 0140	36,–	433623 0140	36,70	433624 0140	51,20
14.5			433622 0145	48,–	433623 0145	48,80	433624 0145	64,80
15			433622 0150	36,–	433623 0150	36,70	433624 0150	51,20
15.5			433622 0155	48,–	433623 0155	48,80	433624 0155	64,80
16			433622 0160	36,–	433623 0160	36,70	433624 0160	51,20
16.5					433623 0165	48,80	433624 0165	64,80
17					433623 0170	36,70	433624 0170	51,20
17.5					433623 0175	48,80	433624 0175	64,80
18					433623 0180	36,70	433624 0180	51,20
18.5					433623 0185	48,80	433624 0185	64,80
19					433623 0190	36,70	433624 0190	51,20
19.5					433623 0195	48,80	433624 0195	64,80
20					433623 0200	36,70	433624 0200	51,20
20.5							433624 0205	64,80
21							433624 0210	51,20
21.5							433624 0215	64,80
22							433624 0220	51,20
22.5							433624 0225	64,80
23							433624 0230	51,20
23.5							433624 0235	64,80
24							433624 0240	51,20
24.5							433624 0245	64,80
25							433624 0250	51,20
25.5							433624 0255	64,80
26							433624 0260	51,20
	4202		4202		4202		4202	

ATORN® ER precision collets 5 µm

- True-running accuracy 5 µm
- For greater system concentricity
- Collapse 0.5 mm

Single

Clamp Ø mm	ER16HP/426E D = 17 mm L = 27,5 mm art.no.	€	ER25HP/430E D = 26 mm L = 34 mm art.no.	€	ER32HP/470E D = 33 mm L = 40 mm art.no.	€	ER40HP/472E D = 41 mm L = 46 mm art.no.	€
1	**433221** 0010	21,–	**433222** 0010	23,–				
1.5	433221 0015	21,–	433222 0015	23,–				
2	433221 0020	21,–	433222 0020	23,–	**433223** 0020	24,60		
2.5	433221 0025	21,–	433222 0025	23,–	433223 0025	24,60		
3	433221 0030	17,–	433222 0030	18,–	433223 0030	19,–	**433224** 0030	33,20
3.5	433221 0035	29,50	433222 0035	29,90	433223 0035	30,80	433224 0035	35,20
4	433221 0040	17,–	433222 0040	18,–	433223 0040	19,–	433224 0040	24,50
4.5	433221 0045	29,50	433222 0045	29,90	433223 0045	30,80	433224 0045	35,20
5	433221 0050	17,–	433222 0050	18,–	433223 0050	19,–	433224 0050	24,50
5.5	433221 0055	29,50	433222 0055	29,90	433223 0055	30,80	433224 0055	35,20
6	433221 0060	17,–	433222 0060	18,–	433223 0060	19,–	433224 0060	24,50
6.5	433221 0065	29,50	433222 0065	29,90	433223 0065	30,80	433224 0065	35,20
7	433221 0070	17,–	433222 0070	18,–	433223 0070	19,–	433224 0070	24,50
7.5	433221 0075	29,50	433222 0075	29,90	433223 0075	30,80	433224 0075	35,20
8	433221 0080	17,–	433222 0080	18,–	433223 0080	19,–	433224 0080	24,50
8.5	433221 0085	29,50	433222 0085	29,90	433223 0085	30,80	433224 0085	35,20
9	433221 0090	17,–	433222 0090	18,–	433223 0090	19,–	433224 0090	24,50
9.5	433221 0095	29,50	433222 0095	29,90	433223 0095	30,80	433224 0095	35,20
10	433221 0100	17,–	433222 0100	18,–	433223 0100	19,–	433224 0100	24,50
10.5			433222 0105	29,90	433223 0105	30,80	433224 0105	35,20
11			433222 0110	18,–	433223 0110	19,–	433224 0110	24,50
11.5			433222 0115	29,90	433223 0115	30,80	433224 0115	35,20
12			433222 0120	18,–	433223 0120	19,–	433224 0120	24,50
12.5			433222 0125	29,90	433223 0125	30,80	433224 0125	35,20
13			433222 0130	18,–	433223 0130	19,–	433224 0130	24,50
13.5			433222 0135	29,90	433223 0135	30,80	433224 0135	35,20
14			433222 0140	18,–	433223 0140	19,–	433224 0140	24,50
14.5			433222 0145	29,90	433223 0145	30,80	433224 0145	35,20
15			433222 0150	18,–	433223 0150	19,–	433224 0150	24,50
15.5			433222 0155	29,90	433223 0155	30,80	433224 0155	35,20
16			433222 0160	18,–	433223 0160	19,–	433224 0160	24,50
16.5							433224 0165	35,20
17					433223 0170	19,–	433224 0170	24,50
17.5					433223 0175	30,80	433224 0175	35,20
18					433223 0180	19,–	433224 0180	24,50
18.5					433223 0185	30,80	433224 0185	35,20
19					433223 0190	19,–	433224 0190	24,50
19.5					433223 0195	30,80	433224 0195	35,20
20					433223 0200	19,–	433224 0200	24,50
20.5							433224 0205	35,20
21							433224 0210	24,50
21.5							433224 0215	35,20
22							433224 0220	24,50
22.5							433224 0225	35,20
23							433224 0230	24,50
23.5							433224 0235	35,20
24							433224 0240	24,50
24.5							433224 0245	35,20
25							433224 0250	24,50
25.5							433224 0255	35,20
26							433224 0260	24,50
	4202		4202		4202		4202	

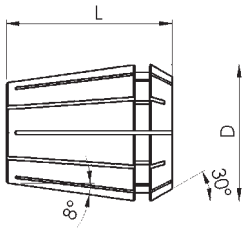
Sets

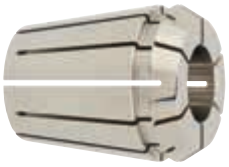
Designation	Contents per set	Clamping range mm	art.no.	€
ER16HP	10-pcs.	Ø1mm - Ø10mm	**433081** 0016	199,–
ER25HP	15-pcs.	Ø2mm - Ø16mm	433081 0025	299,–
ER32HP	18-pcs.	Ø3mm - Ø20mm	433081 0032	379,–
ER40HP	23-pcs.	Ø4mm - Ø26mm	433081 0040	554,–
			4202	

FAHRION® PRAZISION GERC collets 5 µm

- Collapse of 1 mm
  (0.5 mm with clamping diameters of 1 to 2 mm)
- True-running accuracy 5 µm

Fahrion Protect corrosion protection



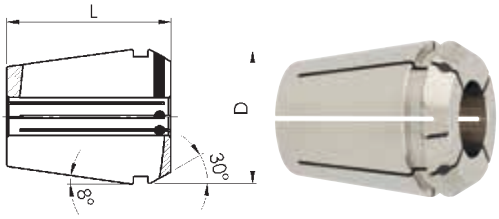


Standard version / type GERC-B

Clamp Ø mm	GERC16 / 426E D = 17 mm L = 27,5 mm art.no.	€	GERC25 430E D = 26 mm L = 34 mm art.no.	€	GERC32 470E D = 33 mm L = 40 mm art.no.	€	GERC40 472E D = 41 mm L = 46 mm art.no.	€
1	**433071** 0010	24,20	**433073** 0010	26,35				
1.5	433071 0015	24,20	433073 0015	26,35				
2	433071 0020	24,20	433073 0020	26,35	**433074** 0020	27,80		
2.5	433071 0025	24,20	433073 0025	26,35	433074 0025	27,80		
3	433071 0030	19,10	433073 0030	20,30	433074 0030	21,60	**433075** 0030	37,50
3.5	433071 0035	32,80	433073 0035	33,90	433074 0035	34,90		
4	433071 0040	19,10	433073 0040	20,30	433074 0040	21,60	433075 0040	27,90
4.5	433071 0045	32,80	433073 0045	33,90	433074 0045	34,90		
5	433071 0050	19,10	433073 0050	20,30	433074 0050	21,60	433075 0050	27,90
5.5	433071 0055	32,80	433073 0055	33,90	433074 0055	34,90		
6	433071 0060	19,10	433073 0060	20,30	433074 0060	21,60	433075 0060	27,90
6.5	433071 0065	32,80	433073 0065	33,90	433074 0065	34,90		
7	433071 0070	19,10	433073 0070	20,30	433074 0070	21,60	433075 0070	27,90
7.5	433071 0075	32,80	433073 0075	33,90	433074 0075	34,90		
8	433071 0080	19,10	433073 0080	20,30	433074 0080	21,60	433075 0080	27,90
8.5	433071 0085	32,80	433073 0085	33,90	433074 0085	34,90	433075 0085	41,80
9	433071 0090	19,10	433073 0090	20,30	433074 0090	21,60	433075 0090	27,90
9.5	433071 0095	32,80	433073 0095	33,90	433074 0095	34,90		
10	433071 0100	19,10	433073 0100	20,30	433074 0100	21,60	433075 0100	27,90
10.5			433073 0105	33,90	433074 0105	34,90	433075 0105	41,80
11			433073 0110	20,30	433074 0110	21,60	433075 0110	27,90
11.5			433073 0115	33,90	433074 0115	34,90		
12			433073 0120	20,30	433074 0120	21,60	433075 0120	27,90
12.5			433073 0125	33,90	433074 0125	34,90		
13			433073 0130	20,30	433074 0130	21,60	433075 0130	27,90
13.5			433073 0135	33,90	433074 0135	34,90		
14			433073 0140	20,30	433074 0140	21,60	433075 0140	27,90
14.5			433073 0145	33,90	433074 0145	34,90		
15			433073 0150	20,30	433074 0150	21,60	433075 0150	27,90
15.5			433073 0155	33,90	433074 0155	34,90		
16			433073 0160	20,30	433074 0160	21,60	433075 0160	27,90
17					433074 0170	21,60	433075 0170	27,90
18					433074 0180	21,60	433075 0180	27,90
19							433075 0190	27,90
20					433074 0200	21,60	433075 0200	27,90
21							433075 0210	27,90
22							433075 0220	27,90
23							433075 0230	27,90
24							433075 0240	27,90
25							433075 0250	27,90
26							433075 0260	27,90
	4119		4119		4119		4119	

Set in a wooden box, standard increasing in increments of 1 mm / type GERC-B

Designation	Contents per set	Clamping range mm	art.no.	€
GERC 16 426E	10-pcs.	1 - 10	**433076** 0000	218,–
GERC 20 428E	12-pcs.	2 - 13	433076 0001	266,–
GERC 25 430E	15-pcs.	2 - 16	433076 0002	336,–
GERC 32 470E	18-pcs.	3 - 20	433076 0003	420,–
GERC 40 472E	23-pcs.	4 - 26	433076 0004	680,–
			4119	



With seal for internal coolant supply / type GERC-BD

Clamp Ø mm	GERC16-BD 425E D = 16,7 mm L = 27,5 mm art.no.	€	GERC25-BD 429E D = 25,7 mm L = 34 mm art.no.	€	GERC32-BD 429E D = 32,7 mm L = 34 mm art.no.	€	GERC40-BD 471E D = 40,7 mm L = 46 mm art.no.	€
3	**433131** 1603	45,50	**433133** 2503	53,–	**433134** 3203	55,–		
4	433131 1604	45,50	433133 2504	47,50	433134 3204	49,50		
5	433131 1605	51,–	433133 2505	53,–	433134 3205	55,–		
6	433131 1606	45,50	433133 2506	47,50	433134 3206	49,50	**433135** 4006	58,–
8	433131 1608	45,50	433133 2508	47,50	433134 3208	49,50	433135 4008	58,–
10	433131 1610	45,50	433133 2510	47,50	433134 3210	49,50	433135 4010	58,–
12			433133 2512	47,50	433134 3212	49,50	433135 4012	58,–
14			433133 2514	47,50	433134 3214	49,50	433135 4014	58,–
16			433133 2516	47,50	433134 3216	49,50	433135 4016	58,–
18					433134 3218	49,50	433135 4018	58,–
20					433134 3220	49,50	433135 4020	58,–
22							433135 4022	64,–
25							433135 4025	58,–
	4118		4118		4118		4118	

Set in a wooden box, with seals for internal coolant supply / type GERC-D

Designation	Contents per set	Clamping range mm	art.no.	€
GERC16-BD / 425E	Ø3-4-5-6-8-10	3 - 10	**433077** 0001	293,–
GERC20-BD / 427E	Ø3-4-5-6-8-10-12	3 - 12	433077 0002	349,–
GERC25-BD / 429E	Ø4-6-8-10-12-14-16	4 - 16	433077 0003	353,–
GERC32-BD / 469E	Ø4-6-8-10-12-14-16-20	4 - 20	433077 0004	417,–
			4118	

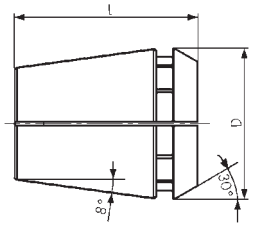
... maximum material removal rate

ATORN®
High quality for great performance

SARA® ER collets, 10 µm

DIN 6499-B

- Collapse of 1 mm (for ER11; 0.5 mm for clamping diameters of 1 to 2 mm)
- True running accuracy 10 µm



Individual

Ø mm	ER11 4008E D = 11,5 mm L = 18 mm art.no.	€	ER16 426E D = 17 mm L = 27,5 mm art.no.	€	ER25 430E D = 26 mm L = 34 mm art.no.	€	ER32 470E D = 33 mm L = 40 mm art.no.	€	ER40 472E D = 41 mm L = 46 mm art.no.	€
1	**433210** 0010	16,70	**433211** 0010	16,10						
1.5	433210 0015	16,70								
2	433210 0020	16,70	433211 0020	16,10	**433213** 0020	16,90				
2.5	433210 0025	16,70								
3	433210 0030	16,70	433211 0030	16,10	433213 0030	16,90	**433214** 0030	18,10	**433215** 0030	22,–
3.5	433210 0035	16,70								
4	433210 0040	16,70	433211 0040	16,10	433213 0040	16,90	433214 0040	18,10	433215 0040	22,–
4.5	433210 0045	16,70								
5	433210 0050	16,70	433211 0050	16,10	433213 0050	16,90	433214 0050	18,10	433215 0050	22,–
5.5	433210 0055	16,70								
6	433210 0060	16,70	433211 0060	16,10	433213 0060	16,90	433214 0060	18,10	433215 0060	22,–
6.5	433210 0065	16,70								
7	433210 0070	16,70	433211 0070	16,10	433213 0070	16,90	433214 0070	18,10	433215 0070	22,–
8			433211 0080	16,10	433213 0080	16,90	433214 0080	18,10	433215 0080	22,–
9			433211 0090	16,10	433213 0090	16,90	433214 0090	18,10	433215 0090	22,–
10			433211 0100	16,10	433213 0100	16,90	433214 0100	18,10	433215 0100	22,–
11					433213 0110	16,90	433214 0110	18,10	433215 0110	22,–
12					433213 0120	16,90	433214 0120	18,10	433215 0120	22,–
13					433213 0130	16,90	433214 0130	18,10	433215 0130	22,–
14					433213 0140	16,90	433214 0140	18,10	433215 0140	22,–
15					433213 0150	16,90	433214 0150	18,10	433215 0150	22,–
16					433213 0160	16,90	433214 0160	18,10	433215 0160	22,–
17							433214 0170	18,10		
18							433214 0180	18,10	433215 0180	22,–
19							433214 0190	18,10		
20							433214 0200	18,10	433215 0200	22,–
21									433215 0210	22,–
22									433215 0220	22,–
25									433215 0250	22,–
26									433215 0260	22,–
	4120		4120		4120		4120		4120	

Set on a wooden stand

- ER11 = increasing in increments of 0.5 mm, ER16 - ER40 = increasing in increments of 1 mm

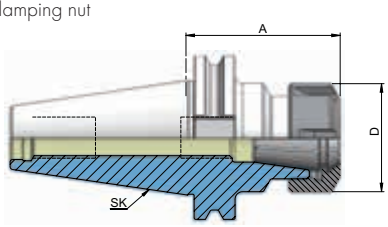
Designation	Contents per set	Clamping range mm	art.no.	€
ER11 4008E	13-pcs.	1 - 7	**433220** 1110	225,–
ER16 426E	10-pcs.	1 - 10	433220 1610	180,–
ER20 428E	12-pcs.	2 - 13	433220 2012	219,–
ER25 430E	15-pcs.	2 - 16	433220 2515	280,–
ER32 470E	18-pcs.	3 - 20	433220 3218	345,–
ER40 472E	24-pcs.	3 - 26	433220 4023	532,–
			4120	

433220 1110

433220 2515

SARA® ER collet chuck set DIN ISO 7388-1 / DIN 69871AD/AF SK40

- **ER collets, DIN 6499, increasing in 1 mm increments, max. true running accuracy < 0.008 mm**
- **ER collet chuck, DIN ISO 7388-1 / DIN 69871AD/AF SK 40, max. true running accuracy < 0.005 mm**
- Alloyed case-hardened steel with a core tensile strength of min. 950 N/mm² Case-hardened to HRc 60 ± 2 (HV 700 ± 50), case depth 0.8 mm ± 0.2 mm, burnished
- **Pre-balanced to G 6.3 / 15,000 rpm**
- Taper angle tolerance quality < AT3 in accordance with DIN 7187 and DIN 2080
- Supplied in plastic case with clamping key and clamping nut



Contents per set	A mm	D mm	Collet	Clamping range mm	art.no.	€
17-pcs.	70	42	ER25	2 - 16	**431103** 4917	360,–
20-pcs.	70	50	ER32	3 - 20	431103 4920	415,–

4120

SARA® Mini ER collet chuck extension

- Hardened (58 - 60 HRc) and precision-ground
- True-running accuracy, straight shank to internal taper, max. 5 µm; taper angle tolerance quality AT3
- Supplied with clamping and removal nuts

Individual

Clamping range mm	for collets	L mm	D mm	art.no.	€
1 - 7	ER11	161	16	**432000** 1110	140,–
1 - 10	ER16	161	20	432000 1610	144,–
1 - 10	ER16	191	20	432000 1615	157,–
1.5 - 13	ER20	164	20	432000 2010	168,–
1.5 - 13	ER20	188	20	432000 2015	174,–

4120

Set

- With collet chuck extension, collets, clamping nuts, key

Clamping range mm	Collet	L mm	Number of collets	art.no.	€
0.5 - 7	ER11	149	13	**432100** 1110	360,–
1 - 10	ER16	161	10	432100 1610	305,–
1 - 10	ER16	191	10	432100 1615	315,–
1.5 - 13	ER20	166	12	432100 2010	370,–
1.5 - 13	ER20	236	12	432100 2015	395,–

4120

... with precision.

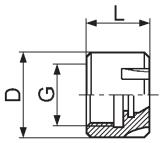
ATORN®
Performance demands quality

SARA® ER clamping nuts

- **For collets in accordance with DIN 6499 (ER/ESX)**
- Case-hardened and ground, suitable for increased speeds

Mini nuts

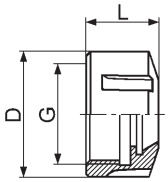
- 50-54 HRc, ground on all sides
- Small constructional dimensions



suitable for	Tightening torque max. mm	Rotational speed max. r/min	D mm	L mm	Thread	art.no.	€
ER 11	18	70000	16	12	M13 x 0.75	**431010** 1011	22,10
ER 16	28	60000	22	18	M19 x 1	431010 1016	21,–
ER 20	35	50000	28	19	M24 x 1	431010 1020	21,50
						4120	

Standard

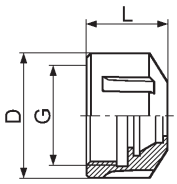
- 56-60 HRc, pre-balanced



suitable for	Tightening torque max. mm	Rotational speed max. r/min	D mm	L mm	Thread	art.no.	€
ER 16	50	10000	32	17	M22 x 1.5	**431010** 0016	20,20
ER 20	75	10000	35	18.5	M25 x 1.5	431010 0020	20,20
ER 25	85	10000	42	20	M32 x 1.5	431010 0025	20,80
ER 32	105	10000	50	22.5	M40 x 1.5	431010 0032	22,20
ER 40	150	10000	63	22.5	M50 x 1.5	431010 0040	29,30
						4120	

Type HP for sealing washers

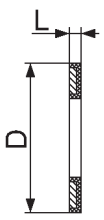
- 56-60 HRc, pre-balanced
- For holding HP sealing washers,
- Operating pressure up to 80 bar



suitable for	Tightening torque max. mm	Rotational speed max. r/min	D mm	L mm	Thread	art.no.	€
ER 16	50	40000	32	22	M22 x 1.5	**431019** 0016	29,80
ER 25	85	35000	42	24.7	M32 x 1.5	431019 0025	34,–
ER 32	105	35000	50	27	M40 x 1.5	431019 0032	36,10
ER 40	150	25000	63	30.7	M50 x 1.5	431019 0040	42,60
						4118	

FAHRION® PRÄZISION Sealing washers for ER collet chucks

- For ER clamping nuts, 431019....
- For Fahrion clamping nuts **CENTRO|P (HPC-DI)** 431237....
- **Please specify shank Ø dimension in mm as four-digit figu e** (Example HP25 DI **Ø8.5** = 431021 **0085**)

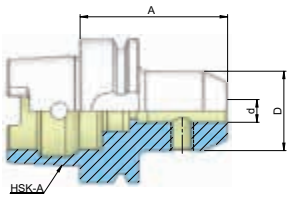


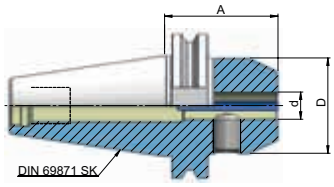
Bridging range -0.1 / +0.4 mm

for shank Ø mm	431020.... HP 16 Di D = 12,6 mm L = 2 mm €	431021.... DI 25 D = 20,2 mm L = 2 mm €	431022.... HP 32 Di D = 26,2 mm L = 2 mm €	431023.... HP 40 DI D = 34,2 mm L = 2 mm €
2 - 2.5	18,20	18,20	18,90	
3 - 10	14,90	14,90	15,50	18,90
10.5 - 16		14,90	15,50	18,90
17 - 20			15,50	18,90
21 - 26				18,90
	4118	4118	4118	4118

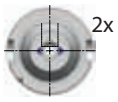
SARA® Milling cutter holding fixtu e, DIN 6359

DIN 6359





- **For straight shanks, DIN 1835-B (WELDON)**
- **Pre-balanced to G 2.5 / 25,000 rpm**
- Alloyed case-hardened steel with a core tensile strength of min. 950 N/mm²
- Case-hardened to HRc 60 ± 2 (HV 700 ± 50), case depth 0.8 mm ± 0.2 mm
- Taper angle tolerance quality < AT3 in accordance with DIN 7187 and DIN 2080
- Max. true running accuracy < 0.005 mm
- Supplied with clamping screw
- **Additional shank designs and AD/B version available on request**
- **Art. No. 434504, 434508 and 434510 at Ø 6 to Ø 18 with two coolant bores**
- **Art. No. 434504, 434508 and 434510 at Ø 20 to Ø 40 with four coolant bores**



d = 6 - 18 mm

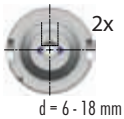
d = 20 - 40 mm

DIN 69893 type A (HSK-A)

- Internal coolant supply
- When machining with internal coolant supply, a coolant transfer pipe with art.no. 431011... should be used

Shank	d mm	A mm	D mm	art.no.	€	With coolant bores art.no.	With coolant bores €
HSK 50	6	65	25	**434509** 5006	85,50	**434510** 5006	95,50
HSK 50	8	65	28	434509 5008	85,50	434510 5008	95,50
HSK 50	10	65	35	434509 5010	85,50	434510 5010	95,50
HSK 50	12	80	42	434509 5012	85,50	434510 5012	95,50
HSK 50	14	80	44	434509 5014	85,50	434510 5014	95,50
HSK 50	16	80	48	434509 5016	85,50	434510 5016	95,50
HSK 50	18	80	50	434509 5018	85,50	434510 5018	95,50
HSK 50	20	80	52	434509 5020	85,50	434510 5020	95,50
HSK 63	6	65	25	434509 6306	85,50	434510 6306	95,50
HSK 63	6	100	25	434509 6406	100,–		
HSK 63	6	160	25	434509 6506	134,–		
HSK 63	8	65	28	434509 6308	85,50	434510 6308	95,50
HSK 63	8	100	28	434509 6408	100,–		
HSK 63	8	160	28	434509 6508	134,–		
HSK 63	10	65	35	434509 6310	85,50	434510 6310	95,50
HSK 63	10	100	35	434509 6410	100,–		
HSK 63	10	160	35	434509 6510	134,–		
HSK 63	12	160	42	434509 6412	134,–		
HSK 63	12	80	42	434509 6312	85,50	434510 6312	95,50
HSK 63	14	80	44	434509 6314	85,50	434510 6314	95,50
HSK 63	14	160	44	434509 6514	134,–		
				4117		4117	

Shank	d mm	A mm	D mm	art.no.	€	With coolant bores art.no.	With coolant bores €
HSK 63	16	80	48	434509 6316	85,50	434510 6316	95,50
HSK 63	16	160	48	434509 6416	134,–		
HSK 63	18	80	50	434509 6318	85,50	434510 6318	95,50
HSK 63	18	160	50	434509 6518	134,–		
HSK 63	20	80	52	434509 6320	85,50	434510 6320	95,50
HSK 63	20	160	52	434509 6420	134,–		
HSK 63	25	110	63	434509 6325	94,50	434510 6325	105,–
HSK 63	32	110	72	434509 6332	99,50	434510 6332	110,–
HSK 63	40	125	80	434509 6340	114,–	434510 6340	124,–
HSK 100	6	80	25	434509 1006	119,–	434510 1006	139,–
HSK 100	8	80	28	434509 1008	119,–	434510 1008	139,–
HSK 100	10	80	35	434509 1010	119,–	434510 1010	139,–
HSK 100	12	80	42	434509 1012	119,–	434510 1012	139,–
HSK 100	14	80	44	434509 1014	119,–	434510 1014	139,–
HSK 100	16	100	48	434509 1016	119,–	434510 1016	139,–
HSK 100	18	100	50	434509 1018	119,–	434510 1018	139,–
HSK 100	20	100	52	434509 1020	119,–	434510 1020	139,–
HSK 100	25	100	65	434509 1025	138,–	434510 1025	147,–
HSK 100	32	100	72	434509 1032	144,–	434510 1032	151,–
HSK 100	40	105	80	434509 1040	156,–	434510 1040	180,–
				4117		4117	



d = 6 - 18 mm

d = 20 - 40 mm

DIN ISO 7388-1 / DIN 69871 AD

- Internal coolant supply

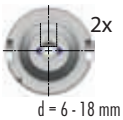
Shank	d mm	A mm	D mm	art.no.	€	With coolant bores art.no.	With coolant bores €
SK 40	6	50	25	**434503** 4006	38,–	**434504** 4006	45,–
SK 40	6	100	25	434503 4106	45,–	434504 4106	54,–
SK 40	6	160	25	434503 4206	95,50		
SK 40	8	50	28	434503 4008	36,–	434504 4008	43,–
SK 40	8	100	28	434503 4108	42,–	434504 4108	52,–
SK 40	8	160	28	434503 4208	87,50		
SK 40	10	50	35	434503 4010	36,–	434504 4010	43,–
SK 40	10	100	35	434503 4110	42,–	434504 4110	52,–
SK 40	10	160	35	434503 4210	87,50		
SK 40	12	50	42	434503 4012	36,–	434504 4012	43,–
SK 40	12	100	42	434503 4112	42,–	434504 4112	52,–
SK 40	12	160	42	434503 4212	87,50		
SK 40	14	50	44	434503 4014	36,–	434504 4014	45,–
SK 40	14	100	44	434503 4114	42,–	434504 4114	56,–
SK 40	14	160	44	434503 4214	87,50		
SK 40	16	35	45	434503 4216	41,60		
SK 40	16	63	48	434503 4016	36,–	434504 4016	45,–
SK 40	16	100	48	434503 4116	42,–	434504 4116	56,–
SK 40	16	160	48	434503 4316	87,50		
				4117		4117	

Shank	d mm	A mm	D mm	art.no.	€	With coolant bores art.no.	With coolant bores €
SK 40	18	63	50	434503 4018	36,–	434504 4018	45,–
SK 40	18	100	50	434503 4118	42,–	434504 4118	56,–
SK 40	18	160	50	434503 4218	87,50		
SK 40	20	35	45	434503 4220	41,60		
SK 40	20	63	52	434503 4020	36,–	434504 4020	45,–
SK 40	20	100	52	434503 4120	42,–	434504 4120	56,–
SK 40	20	160	52	434503 4320	87,50		
SK 40	25	35	50	434503 4225	47,70		
SK 40	25	100	63	434503 4025	42,–	434504 4025	58,–
SK 40	25	160	63	434503 4325	95,50		
SK 40	32	65	50	434503 4232	56,–		
SK 40	32	100	72	434503 4032	44,–	434504 4032	59,–
SK 40	32	160	72	434503 4332	99,50		
SK 40	40	120	80	434503 4040	56,–	434504 4040	62,–
SK 50	6	63	25	434503 5006	54,–	434504 5006	68,–
SK 50	6	100	25	434503 5106	64,–		
SK 50	6	160	25	434503 5206	130,–		
SK 50	8	63	28	434503 5008	52,–	434504 5008	66,–
SK 50	8	100	28	434503 5108	62,–		
				4117		4117	

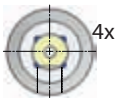
Continued on next page >>>

Shank	d mm	A mm	D mm	art.no.	€	With coolant bores art.no.	€
SK 50	8	160	28	434503 5208	123,–		
SK 50	10	63	35	434503 5010	52,–	434504 5010	66,–
SK 50	10	100	35	434503 5110	62,–		
SK 50	10	160	35	434503 5210	123,–		
SK 50	12	63	42	434503 5012	52,–	434504 5012	66,–
SK 50	12	100	42	434503 5112	62,–		
SK 50	12	160	42	434503 5212	123,–		
SK 50	14	63	44	434503 5014	52,–	434504 5014	66,–
SK 50	14	100	44	434503 5114	62,–		
SK 50	14	160	44	434503 5214	123,–		
SK 50	16	63	48	434503 5016	52,–	434504 5016	66,–
SK 50	16	100	48	434503 5116	62,–		
SK 50	16	160	48	434503 5216	123,–		
				4117		4117	

Shank	d mm	A mm	D mm	art.no.	€	With coolant bores art.no.	€
SK 50	18	63	50	434503 5018	52,–	434504 5018	66,–
SK 50	18	100	50	434503 5118	62,–		
SK 50	18	160	50	434503 5218	123,–		
SK 50	20	63	52	434503 5020	52,–	434504 5020	66,–
SK 50	20	100	52	434503 5120	62,–		
SK 50	20	160	52	434503 5220	123,–		
SK 50	25	80	65	434503 5025	58,–	434504 5025	72,–
SK 50	25	120	65	434503 5125	81,–		
SK 50	25	160	65	434503 5225	97,50		
SK 50	32	100	72	434503 5032	62,–	434504 5032	73,–
SK 50	32	160	72	434503 5132	143,–		
SK 50	40	100	80	434503 5040	67,–	434504 5040	76,–
SK 50	40	160	80	434503 5140	106,–		
				4117		4117	



d = 6 - 18 mm



d = 20 - 40 mm

DIN ISO 7388-2 / MAS BT JIS B 6339

- Internal coolant supply

Shank	d mm	A mm	D mm	art.no.	€	With coolant bores art.no.	€
SK 40	6	50	25	**434507** 4006	38,–	**434508** 4006	45,–
SK 40	6	100	25	434507 4106	45,–		
SK 40	6	160	25	434507 4306	82,–		
SK 40	8	50	28	434507 4008	36,–	434508 4008	43,–
SK 40	8	100	28	434507 4108	42,–		
SK 40	8	160	28	434507 4308	79,–		
SK 40	10	63	35	434507 4010	36,–	434508 4010	43,–
SK 40	10	100	35	434507 4110	42,–		
SK 40	10	160	35	434507 4310	79,–		
SK 40	12	63	42	434507 4012	36,–	434508 4012	43,–
SK 40	12	100	42	434507 4112	42,–		
SK 40	12	160	42	434507 4312	79,–		
SK 40	14	63	44	434507 4014	36,–	434508 4014	45,–
SK 40	14	100	44	434507 4114	42,–		
SK 40	16	35	45	434507 4216	42,–		
SK 40	16	63	48	434507 4016	36,–	434508 4016	45,–
SK 40	16	100	48	434507 4116	42,–		
SK 40	16	160	48	434507 4316	79,–		
SK 40	18	63	50	434507 4018	36,–	434508 4018	45,–
SK 40	18	100	50	434507 4118	42,–		
SK 40	20	35	45	434507 4220	42,–		
SK 40	20	63	52	434507 4020	36,–	434508 4020	45,–
SK 40	20	100	52	434507 4120	42,–		
SK 40	20	160	52	434507 4320	79,–		
				4117		4117	

Shank	d mm	A mm	D mm	art.no.	€	With coolant bores art.no.	€
SK 40	25	35	45	434507 4225	48,–		
SK 40	25	90	63	434507 4025	40,–	434508 4025	58,–
SK 40	25	160	63	434507 4325	85,50		
SK 40	32	65	62	434507 4232	52,–		
SK 40	32	100	72	434507 4032	44,–	434508 4032	59,–
SK 40	32	160	72	434507 4332	93,50		
SK 40	40	120	80	434507 4040	56,–	434508 4040	68,–
SK 50	6	63	25	434507 5006	60,–	434508 5006	68,–
SK 50	8	63	28	434507 5008	58,–	434508 5008	66,–
SK 50	10	63	35	434507 5010	58,–	434508 5010	66,–
SK 50	10	100	35	434507 5110	75,–		
SK 50	12	80	42	434507 5012	58,–	434508 5012	66,–
SK 50	12	100	42	434507 5112	75,–		
SK 50	14	80	44	434507 5014	58,–	434508 5014	66,–
SK 50	16	80	48	434507 5016	58,–	434508 5016	66,–
SK 50	16	100	48	434507 5116	75,–		
SK 50	18	80	50	434507 5018	58,–	434508 5018	66,–
SK 50	20	80	52	434507 5020	58,–	434508 5020	66,–
SK 50	20	100	52	434507 5120	75,–		
SK 50	25	100	65	434507 5025	63,–	434508 5025	73,–
SK 50	25	160	65	434507 5325	143,–		
SK 50	32	105	72	434507 5032	67,–	434508 5032	78,–
SK 50	32	160	72	434507 5332	121,–		
SK 50	40	110	80	434507 5040	74,–	434508 5040	85,50
				4117		4117	

DIN 2080

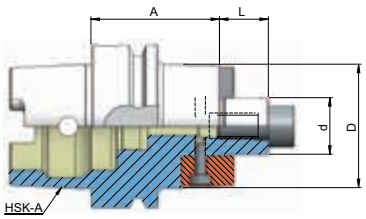
Shank	d mm	A mm	D mm	art.no.	€
SK 40	6	50	25	**434501** 4006	37,–
SK 40	8	50	28	434501 4008	35,–
SK 40	10	50	35	434501 4010	35,–
SK 40	12	50	42	434501 4012	35,–
SK 40	14	50	44	434501 4014	35,–
SK 40	16	63	48	434501 4016	35,–
SK 40	18	63	50	434501 4018	35,–
SK 40	20	63	52	434501 4020	35,–
SK 40	25	80	63	434501 4025	39,–
SK 40	32	80	72	434501 4032	44,–
SK 40	40	90	80	434501 4040	55,–
				4117	

Shank	d mm	A mm	D mm	art.no.	€
SK 50	6	63	25	434501 5006	53,–
SK 50	8	63	28	434501 5008	51,–
SK 50	10	63	35	434501 5010	51,–
SK 50	12	63	42	434501 5012	51,–
SK 50	14	63	44	434501 5014	51,–
SK 50	16	63	48	434501 5016	51,–
SK 50	18	63	50	434501 5018	51,–
SK 50	20	63	52	434501 5020	51,–
SK 50	25	80	65	434501 5025	57,–
SK 50	32	80	72	434501 5032	61,–
SK 50	40	90	80	434501 5040	67,–
				4117	

SARA® Shell-type milling cutter arbour with transverse slot

DIN 6357

- **With enlarged collar diameter**
- **Pre-balanced to G 2.5 / 25,000 rpm**
- Alloyed case-hardened steel, core tensile strength min. 950 N/mm²
- Case-hardened to HRc 60 ± 2 (HV 700 ± 50), case depth 0.8 mm ± 0.2 mm
- Taper angle tolerance quality < AT3 in accordance with DIN 7187 and DIN 2080
- Max. true running accuracy < 0.005 mm
- Supplied with carrier blocks and milling cutter retaining screw
- **Additional shank designs and AD/AF version available on request**



DIN 69893 type A (HSK-A)

- Internal coolant supply
- When machining with internal coolant supply, a coolant transfer pipe with art.no. 431011... should be used
- *= Also with four DIN 2079-compliant threaded bores for holding cutter heads

Shank		D1 mm	A mm	D mm	L1 mm	art.no.	€
HSK 50		16	50	38	17	**435309** 5016	98,50
HSK 50		22	60	48	19	435309 5022	98,50
HSK 50		27	60	58	21	435309 5027	102,–
HSK 50		32	60	78	24	435309 5032	141,–
HSK 63		16	50	38	17	435309 6316	106,–
HSK 63		16	100	38	17	435309 6416	126,–
HSK 63		16	160	38	17	435309 6516	177,–
HSK 63		22	50	48	19	435309 6322	106,–
HSK 63		22	100	48	19	435309 6422	126,–
HSK 63		22	160	48	19	435309 6522	177,–
HSK 63		27	60	58	21	435309 6327	114,–
HSK 63		27	100	58	21	435309 6427	134,–
HSK 63		27	160	58	21	435309 6527	177,–
HSK 63		32	60	78	24	435309 6332	118,–
HSK 63		32	100	78	24	435309 6432	138,–
HSK 63		32	160	78	24	435309 6532	192,–
HSK 63	*	40	60	88	27	435309 6340	132,–
HSK 63	*	40	100	88	27	435309 6440	141,50
HSK 63	*	40	160	88	27	435309 6540	205,–
HSK 100		16	50	38	17	435309 1016	134,–
HSK 100		16	100	38	17	435309 1116	166,–
HSK 100		16	160	38	17	435309 1216	240,–
HSK 100		22	50	48	19	435309 1022	134,–
HSK 100		22	100	48	19	435309 1122	166,–
HSK 100		22	160	48	19	435309 1222	240,–
HSK 100		27	50	58	21	435309 1027	139,–
HSK 100		27	100	58	21	435309 1127	169,–
HSK 100		27	160	58	21	435309 1227	245,–
HSK 100		32	50	78	24	435309 1032	149,–
HSK 100		32	100	78	24	435309 1132	178,–
HSK 100		32	160	78	24	435309 1232	260,–
HSK 100	*	40	60	88	27	435309 1040	154,–
HSK 100	*	40	100	88	27	435309 1140	193,–

4117

DIN ISO 7388-1 / DIN 69871 AD

- Internal coolant supply
- *= Also with four DIN 2079-compliant threaded bores for holding cutter heads

Shank		D1 mm	A mm	D mm	L1 mm	art.no.	€
SK 40		16	35	38	17	**435303** 4016	49,–
SK 40		16	100	38	17	435303 4116	60,–
SK 40		16	160	38	17	435303 4216	85,–
SK 40		22	35	48	19	435303 4022	49,–
SK 40		22	100	48	19	435303 4122	60,–
SK 40		22	160	48	19	435303 4222	85,–
SK 40		27	40	58	21	435303 4027	50,–
SK 40		27	100	58	21	435303 4127	61,–

4117

Continued on next page >>>

Shank		D1 mm	A mm	D mm	L1 mm	art.no.	€
SK 40		27	160	58	21	435303 4227	96,–
SK 40		32	50	78	24	435303 4032	53,–
SK 40		32	100	78	24	435303 4132	65,–
SK 40		32	160	78	24	435303 4232	92,50
SK 40	*	40	50	88	27	435303 4040	64,–
SK 40	*	40	160	88	27	435303 4240	119,50
SK 50		16	35	38	17	435303 5016	64,–
SK 50		16	100	38	17	435303 5116	78,–
SK 50		16	160	38	17	435303 5216	110,50
SK 50		22	35	48	19	435303 5022	64,–
SK 50		22	100	48	19	435303 5122	78,–
SK 50		22	160	48	19	435303 5222	110,50
SK 50		27	40	58	21	435303 5027	64,–
SK 50		27	100	58	21	435303 5127	78,–
SK 50		27	160	58	21	435303 5227	110,50
SK 50		32	50	78	24	435303 5032	68,–
SK 50		32	100	78	24	435303 5132	83,–
SK 50		32	160	78	24	435303 5232	117,50
SK 50	*	40	50	88	27	435303 5040	78,–
SK 50	*	40	100	88	27	435303 5140	96,50
SK 50	*	40	160	88	27	435303 5240	110,50

4117

DIN ISO 7388-2 / MAS BT JIS B 6339

- Internal coolant supply
- *= Also with four DIN 2079-compliant threaded bores for holding cutter heads

Shank		D1 mm	A mm	D mm	L1 mm	art.no.	€
SK 40		16	40	38	17	**435307** 4016	49,–
SK 40		16	100	38	17	435307 4116	59,–
SK 40		16	160	38	17	435307 4216	85,–
SK 40		22	40	48	19	435307 4022	49,–
SK 40		22	100	48	19	435307 4122	59,–
SK 40		22	160	48	19	435307 4222	85,–
SK 40		27	40	58	21	435307 4027	50,–
SK 40		27	100	58	21	435307 4127	59,–
SK 40		27	160	58	21	435307 4227	85,–
SK 40		32	50	78	24	435307 4032	53,–
SK 40		32	100	78	24	435307 4132	64,–
SK 40		32	160	78	24	435307 4232	92,50
SK 40	*	40	50	88	27	435307 4040	64,–
SK 40	*	40	100	88	27	435307 4140	76,–
SK 40	*	40	160	88	27	435307 4240	110,50
SK 50		22	55	48	19	435307 5022	71,–
SK 50		27	55	58	21	435307 5027	71,–
SK 50		32	55	78	24	435307 5032	75,–
SK 50	*	40	55	88	27	435307 5040	85,50

4117

DIN 2080

- *= Also with four DIN 2079-compliant threaded bores for holding cutter heads

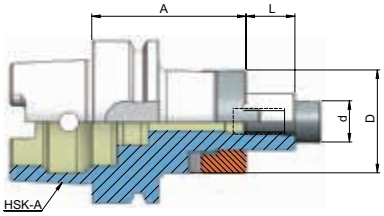
Shank		D1 mm	A mm	D mm	L1 mm	art.no.	€
SK 40		16	30	38	17	**435301** 4016	48,–
SK 40		22	30	48	19	435301 4022	48,–
SK 40		27	30	58	21	435301 4027	49,–
SK 40		32	30	78	24	435301 4032	52,–
SK 40	*	40	30	88	27	435301 4040	63,–
SK 50		22	35	48	19	435301 5022	63,–
SK 50		27	35	58	21	435301 5027	63,–
SK 50		32	40	78	24	435301 5032	68,–
SK 50	*	40	33	88	27	435301 5040	77,–

4117

SARA® Combination shell-type milling cutter arbour

DIN 6358

- **For milling cutters with longitudinal or transverse slots**
- **Pre-balanced to G 2.5 / 25,000 rpm**
- Alloyed case-hardened steel, core tensile strength min. 950 N/mm²
- Case-hardened to HRc 60 ± 2 (HV 700 ± 50), case depth 0.8 mm ± 0.2 mm
- Taper angle tolerance quality < AT3 in accordance with DIN 7187 and DIN 2080
- Max. true running accuracy < 0.005 mm
- Delivery incl. fitting ey, follower ring and **tightening bolt without coolant bore**
- **Additional shank designs and AD/B versions available on request**



DIN 69893 type A (HSK-A)

- Internal coolant supply
- When machining with internal coolant supply, a coolant transfer pipe with art.no. 431011... should be used

Shank	D1 mm	A mm	D mm	L1 mm	art.no.	€
HSK-A 50	16	50	32	17	**434909** 5016	93,50
HSK-A 50	22	50	40	19	434909 5022	95,50
HSK-A 50	27	65	48	21	434909 5027	99,50
HSK-A 50	32	65	58	24	434909 5032	106,–
HSK-A 63	16	60	32	17	434909 6316	95,50
HSK-A 63	16	100	32	17	434909 6416	104,–
HSK-A 63	22	60	40	19	434909 6322	95,50
HSK-A 63	22	100	40	19	434909 6422	104,–
HSK-A 63	27	60	48	21	434909 6327	104,–
HSK-A 63	27	100	48	21	434909 6427	112,–
HSK-A 63	32	60	58	24	434909 6332	108,–
HSK-A 63	32	100	58	24	434909 6432	116,–
HSK-A 63	40	60	70	27	434909 6340	112,–
HSK-A 63	40	100	70	27	434909 6440	120,–
HSK-A 100	16	60	32	17	434909 1016	127,–
HSK-A 100	22	60	40	19	434909 1022	127,–
HSK-A 100	27	60	48	21	434909 1027	132,–
HSK-A 100	32	60	58	24	434909 1032	142,–
HSK-A 100	40	70	70	27	434909 1040	147,–

4117

DIN ISO 7388-1 / DIN 69871 AD

- Internal coolant supply
- **A = 160 and 200 mm incl. coolant bores for cutter heads with internal coolant supply**

Shank	D1 mm	A mm	D mm	L1 mm	art.no.	€
SK 40	16	55	32	17	**434903** 4016	44,–
SK 40	16	100	32	17	434903 4116	56,–
SK 40	16	160	32	17	434903 4216	110,–
SK 40	22	55	40	19	434903 4022	45,–
SK 40	22	100	40	19	434903 4122	57,–
SK 40	22	160	40	19	434903 4222	114,–
SK 40	27	55	48	21	434903 4027	45,–
SK 40	27	100	48	21	434903 4127	58,–
SK 40	27	160	48	21	434903 4227	119,–
SK 40	32	60	58	24	434903 4032	50,–
SK 40	32	100	58	24	434903 4132	60,–
SK 40	32	160	58	24	434903 4232	126,–
SK 40	40	60	70	27	434903 4040	57,–
SK 50	16	55	32	17	434903 5016	61,–
SK 50	16	100	32	17	434903 5116	72,–
SK 50	16	160	32	17	434903 5216	135,–
SK 50	16	200	32	17	434903 5316	161,–
SK 50	22	55	40	19	434903 5022	61,–
SK 50	22	100	40	19	434903 5122	72,–
SK 50	22	160	40	19	434903 5222	138,–

4117

Shank	D1 mm	A mm	D mm	L1 mm	art.no.	€
SK 50	22	200	40	19	434903 5322	167,–
SK 50	27	55	48	21	434903 5027	62,–
SK 50	27	100	48	21	434903 5127	73,–
SK 50	27	160	48	21	434903 5227	143,–
SK 50	27	200	48	21	434903 5327	173,–
SK 50	32	55	58	24	434903 5032	64,–
SK 50	32	100	58	24	434903 5132	74,–
SK 50	32	160	58	24	434903 5232	152,–
SK 50	32	200	58	24	434903 5332	184,–
SK 50	40	55	70	27	434903 5040	71,–
SK 50	40	100	70	27	434903 5140	80,–
SK 50	40	160	70	27	434903 5240	166,–
SK 50	40	200	70	27	434903 5340	193,–

4117

DIN ISO 7388-2 / MAS BT JIS B 6339

Shank	D1 mm	A mm	D mm	L1 mm	art.no.	€
SK 40	16	55	32	17	**434907** 4016	44,–
SK 40	16	100	32	17	434907 4116	56,–
SK 40	22	55	40	19	434907 4022	45,–
SK 40	22	100	40	19	434907 4122	57,–
SK 40	27	55	48	21	434907 4027	45,–
SK 40	27	100	48	21	434907 4127	58,–
SK 40	32	60	58	24	434907 4032	50,–
SK 40	32	100	58	24	434907 4132	60,–
SK 40	40	60	70	27	434907 4040	57,–
SK 50	16	70	32	17	434907 5016	61,–
SK 50	22	70	40	19	434907 5022	61,–
SK 50	27	70	48	21	434907 5027	62,–
SK 50	32	70	58	24	434907 5032	64,–
SK 50	40	70	70	27	434907 5040	71,–

4117

DIN 2080

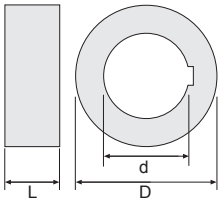
Shank	D1 mm	A mm	D mm	L1 mm	art.no.	€
SK 40	16	52	32	17	**434901** 4016	44,–
SK 40	22	52	40	19	434901 4022	45,–
SK 40	27	52	48	21	434901 4027	45,–
SK 40	32	52	58	24	434901 4032	49,–
SK 40	40	52	70	27	434901 4040	56,–
SK 50	16	55	32	17	434901 5016	60,–
SK 50	22	55	40	19	434901 5022	60,–
SK 50	27	55	48	21	434901 5027	61,–
SK 50	32	55	58	24	434901 5032	63,–
SK 50	40	55	70	27	434901 5040	70,–

4117

SARA® Form B spacing collars

DIN 2084

- Alloyed case-hardened steel, turned and ground, hardened (min. 52 HRc)
- Width parallelism tolerance is IT3 in relation to the bore



d mm	D mm	L mm	art.no.	€
16	27	2	**434922** 2002	7,85
16	27	3	434922 2003	7,85
16	27	4	434922 2004	8,25
16	27	5	434922 2005	8,55
16	27	6	434922 2006	8,75
16	27	10	434922 2010	12,35
16	27	20	434922 2020	15,60
16	27	30	434922 2030	19,40
22	34	2	434922 3002	8,25
22	34	3	434922 3003	8,55
22	34	4	434922 3004	9,05
22	34	5	434922 3005	9,50
22	34	6	434922 3006	10,40
22	34	10	434922 3010	14,20
22	34	20	434922 3020	18,10
22	34	30	434922 3030	23,90
22	34	60	434922 3060	35,70
22	34	100	434922 3100	52,50
27	41	2	434922 4002	8,75
27	41	3	434922 4003	9,05
27	41	4	434922 4004	10,40
27	41	5	434922 4005	11,–
27	41	6	434922 4006	12,05
27	41	10	434922 4010	14,65

4109

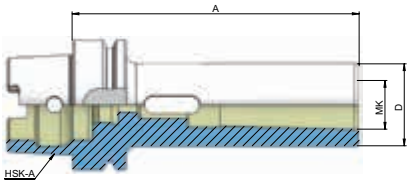
d mm	D mm	L mm	art.no.	€
27	41	20	434922 4020	20,10
27	41	30	434922 4030	28,–
27	41	60	434922 4060	42,80
27	41	100	434922 4100	66,50
32	47	2	434922 5002	9,90
32	47	3	434922 5003	11,55
32	47	4	434922 5004	12,05
32	47	5	434922 5005	12,50
32	47	6	434922 5006	13,40
32	47	10	434922 5010	18,–
32	47	20	434922 5020	25,40
32	47	30	434922 5030	30,70
32	47	60	434922 5060	49,60
32	47	100	434922 5100	77,50
40	55	2	434922 6002	12,85
40	55	3	434922 6003	12,85
40	55	4	434922 6004	15,30
40	55	5	434922 6005	16,10
40	55	6	434922 6006	17,40
40	55	10	434922 6010	22,40
40	55	20	434922 6020	31,20
40	55	30	434922 6030	38,20
40	55	60	434922 6060	62,50
40	55	100	434922 6100	95,50

4109

SARA® Adapter sleeves for Morse tapers with tangs

DIN 6383

- Alloyed case-hardened steel, core tensile strength min. 950 N/mm²
- **Pre-balanced to G 2.5 / 25,000 rpm**
- Case-hardened to HRc 60 ± 2 (HV 700 ± 50), case depth 0.8 mm ± 0.2 mm, burnished
- Taper angle tolerance quality < AT3 in accordance with DIN 7187 and DIN 2080
- Max. true running accuracy < 0.005 mm
- Additional versions available on request



DIN 69893 type A (HSK-A)

- Internal coolant supply
- When machining with internal coolant supply, a coolant transfer pipe with art.no. 431011... should be used

Shank	Shank design interior	A mm	D mm	art.no.	€
HSK-A 50	MT 1	100	25	**433509** 5001	80,–
HSK-A 50	MT 2	120	32	433509 5002	80,–
HSK-A 50	MT3	140	40	433509 5003	81,–
HSK-A 63	MT 1	100	25	433509 6301	83,–
HSK-A 63	MT 2	120	32	433509 6302	83,–
HSK-A 63	MT3	140	40	433509 6303	85,50
HSK-A 63	MT 4	160	48	433509 6304	87,50
HSK-A 100	MT 1	110	25	433509 1001	111,–
HSK-A 100	MT 2	120	32	433509 1002	111,–
HSK-A 100	MT3	150	40	433509 1003	112,–
HSK-A 100	MT 4	170	48	433509 1004	114,–
HSK-A 100	MT 5	200	63	433509 1005	131,–

4117

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DIN ISO 7388-1 / DIN 69871 AD

- Internal coolant supply

Shank	Shank design interior	A mm	D mm	art.no.	€
SK 40	MT 1	50	25	**433503** 4001	36,–
SK 40	MT 2	50	32	433503 4002	36,–
SK 40	MT 2	117	32	433503 4102	61,–
SK 40	MT3	70	40	433503 4003	36,–
SK 40	MT3	133	40	433503 4103	61,–
SK 40	MT 4	95	48	433503 4004	39,–
SK 40	MT 4	156	48	433503 4104	68,–
SK 50	MT 1	45	25	433503 5001	50,–
SK 50	MT 2	60	32	433503 5002	50,–
SK 50	MT 2	117	32	433503 5102	116,–
SK 50	MT3	65	40	433503 5003	50,–
SK 50	MT3	137	40	433503 5103	116,–
SK 50	MT 4	95	48	433503 5004	50,–
SK 50	MT 4	167	48	433503 5104	127,–
SK 50	MT 5	105	63	433503 5005	56,–
SK 50	MT 5	197	63	433503 5105	136,–

4117

DIN ISO 7388-2 / MAS BT JIS B 6339

- Internal coolant supply

Shank	Shank design interior	A mm	D mm	art.no.	€
BT 40	MT 1	50	25	**433507** 4001	36,–
BT 40	MT 2	50	32	433507 4002	36,–
BT 40	MT3	70	40	433507 4003	36,–
BT 40	MT 4	95	48	433507 4004	39,–
BT 50	MT 1	45	25	433507 5001	50,–
BT 50	MT 2	60	32	433507 5002	50,–
BT 50	MT3	65	40	433507 5003	50,–
BT 50	MT 4	95	48	433507 5004	50,–
BT 50	MT 5	105	63	433507 5005	56,–

4117

DIN 2080

Shank	Shank design interior	A mm	D mm	art.no.	€
SK 40	MT 1	50	25	**433501** 4001	35,–
SK 40	MT 2	50	32	433501 4002	35,–
SK 40	MT3	65	40	433501 4003	35,–
SK 40	MT 4	95	48	433501 4004	35,–
SK 50	MT 1	45	25	433501 5001	49,–
SK 50	MT 2	60	32	433501 5002	49,–
SK 50	MT3	65	40	433501 5003	49,–
SK 50	MT 4	70	48	433501 5004	49,–
SK 50	MT 5	105	63	433501 5005	55,–

4117

SARA® Reducing bushes, type H

DIN 2185

- **For tools with a Morse taper**
- Hardened, ground inside and outside

Taper external	Taper internal	Length mm	art.no.	€
MT 1	MT 0	80	**400501** 0100	10,75
MT 2	MT 1	92	400501 0201	9,30
MT3	MT 1	99	400501 0301	11,65
MT3	MT 2	112	400501 0302	11,65
MT 4	MT 1	124	400501 0401	16,50
MT 4	MT 2	124	400501 0402	16,50
MT 4	MT3	140	400501 0403	16,50

4107

Taper external	Taper internal	Length mm	art.no.	€
MT 5	MT 1	156	400501 0501	26,90
MT 5	MT 2	156	400501 0502	26,90
MT 5	MT3	156	400501 0503	26,90
MT 5	MT 4	171	400501 0504	26,90
MT 6	MT3	218	400501 0603	65,20
MT 6	MT 4	218	400501 0604	65,20
MT 6	MT 5	218	400501 0605	65,20

4107

SARA Extension sleeves, type H

DIN 2187

- **For tools with a Morse taper**
- Hardened, ground inside and outside

Extension sleeve

- Inner taper = outer taper

Taper external	Taper internal	External Ø mm	Length mm	art.no.	€
MT 1	MT 1	20	145	**400505** 0101	13,55
MT 2	MT 2	30	175	400505 0202	20,40
MT3	MT3	36	215	400505 0303	26,30
MT 4	MT 4	48	265	400505 0404	44,40
MT 5	MT 5	63	335	400505 0505	89,–

4107

Extended reducing bush

- Inner taper < outer taper

Taper external	Taper internal	External Ø mm	Length mm	art.no.	€
MT 2	MT 1	20	160	**400505** 0201	13,55
MT3	MT 1	20	175	400505 0301	17,25
MT3	MT 2	30	194	400505 0302	20,40
MT 4	MT 1	20	200	400505 0401	26,60
MT 4	MT 2	30	215	400505 0402	26,30
MT 4	MT3	36	240	400505 0403	26,30
MT 5	MT 1	20	232	400505 0501	43,30
MT 5	MT 2	30	247	400505 0502	43,30
MT 5	MT3	36	268	400505 0503	43,30
MT 5	MT 4	48	300	400505 0504	43,30
MT 6	MT 4	48	355	400505 0604	103,–
MT 6	MT 5	63	390	400505 0605	103,–

4107

Expansion sleeve

- Inner taper > outer taper (for easy machining)

Taper external	Taper internal	External Ø mm	Length mm	art.no.	€
MT 1	MT 2	30	160	**400505** 0102	20,40
MT 2	MT3	36	196	400505 0203	26,30
MT3	MT 4	48	240	400505 0304	44,50
MT 4	MT 5	63	300	400505 0405	87,60

4107

AMF Ejector drift

DIN 317

- **For DIN 228 tool tapers**
- Special steel, hardened
- Tempered to a burnished shade

Standard

for Morse tapers	for metr. taper	Total length mm	Cross section mm	art.no.	€
0	4 + 6	90	12 x 3	**400530** 0000	3,43
1 + 2	-	140	20 x 5	400530 0102	4,18
3	-	190	25 x 7	400530 0003	6,56
4	-	225	30 x 10	400530 0004	13,75
5 + 6	-	265	35 x 15	400530 0506	29,50

4159

Semi-automatic

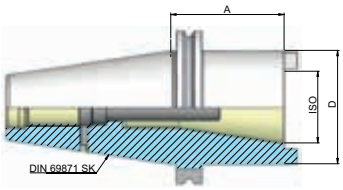
- With plastic-coated handle and fin er guard

for Morse tapers	Total length mm	art.no.	€
1 - 3	330	**400535** 0103	63,–
4 - 6	380	400535 0406	78,50

4159

SARA® Adapter sleeves for steep-angle tapers

- **For holding all steep-angle taper systems (DIN 2080, ISO7388-1 / DIN 69871, MAS BT, ANSI-CAT)**
- **Pre-balanced to G 2.5 / 25,000 rpm**
- Alloyed case-hardened steel with a core tensile strength of min. 950 N/mm²
- Case-hardened to HRc 60 ± 2 (HV 700 ± 50), case depth 0.8 mm ± 0.2 mm
- Taper angle tolerance quality < AT3 in accordance with DIN 7187 and DIN 2080, max. true running accuracy < 0.005 mm



DIN ISO 7388-1 / DIN 69871 A

Shank	Shank design interior	A mm	D mm	art.no.	€
SK 40	SK 30	50	50	**433903** 4030	86,50
SK 40	SK 40	100	63	433903 4040	89,50
SK 50	SK 40	70	70	433903 5040	110,–
SK 50	SK 50	120	97	433903 5050	126,–

4117

DIN ISO 7388-2 / MAS BT JIS B 6339

Shank	Shank design interior	A mm	D mm	art.no.	€
BT 40	30	60	50	**433907** 4030	86,50
BT 40	40	100	63	433907 4040	89,50
BT 50	40	70	70	433907 5040	110,–
BT 50	50	120	97	433907 5050	126,–

4117

DIN 2080

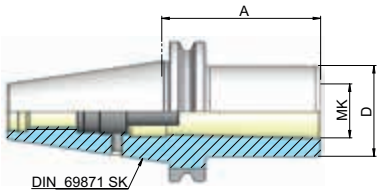
Shank	Shank design interior	A mm	D mm	art.no.	€
SK 40	SK 30	50	50	**433901** 4030	86,50
SK 40	SK 40	100	63	433901 4040	89,50
SK 50	SK 40	50	70	433901 5040	110,–
SK 50	SK 50	125	97	433901 5050	126,–

4117

SARA® Adapter sleeves for MT with clamping threads

DIN 6364

- Alloyed case-hardened steel, core tensile strength min. 950 N/mm²
- **Pre-balanced to G 2.5 / 25,000 rpm**
- Case-hardened to HRc 60 ± 2 (HV 700 ± 50), case depth 0.8 mm ± 0.2 mm
- Taper angle tolerance quality < AT3 in accordance with DIN 7187 and DIN 2080
- Max. true running accuracy < 0.005 mm
- Additional versions available on request



DIN ISO 7388-1 / DIN 69871 A

Shank	Shank design interior	A mm	D mm	art.no.	€
SK 40	MT 1	50	25	**433703** 4001	58,–
SK 40	MT 2	50	32	433703 4002	58,–
SK 40	MT3	70	40	433703 4003	58,–
SK 40	MT 4	95	48	433703 4004	62,–
SK 50	MT 1	45	25	433703 5001	75,–
SK 50	MT 2	60	32	433703 5002	75,–
SK 50	MT3	65	40	433703 5003	75,–
SK 50	MT 4	70	48	433703 5004	81,–
SK 50	MT 5	100	63	433703 5005	83,–

4117

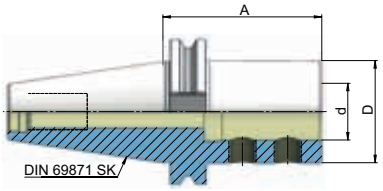
DIN ISO 7388-2 / MAS BT JIS B 6339

Shank	Shank design interior	A mm	D mm	art.no.	€
BT 40	MT 1	50	25	**433707** 4001	58,–
BT 40	MT 2	50	32	433707 4002	58,–
BT 40	MT3	70	40	433707 4003	58,–
BT 40	MT 4	95	48	433707 4004	62,–
BT 40	MT 4	110	63	433707 4104	68,–
BT 50	MT 1	45	25	433707 5001	75,–
BT 50	MT 2	60	32	433707 5002	75,–
BT 50	MT3	65	40	433707 5003	75,–
BT 50	MT 4	70	48	433707 5004	81,–
BT 50	MT 5	100	63	433707 5005	83,–
BT 50	MT 4	85	63	433707 5104	87,50
BT 50	MT 5	118	78	433707 5105	95,50

4117

SARA® Tool holding fixtu e for indexable insert drill bits

- Alloyed case-hardened steel, core tensile strength min. 950 N/mm²
- **Pre-balanced to G 2.5 / 25,000 rpm**
- Case-hardened to HRc 60 ± 2 (HV 700 ± 50), case depth 0.8 mm ± 0.2 mm
- Taper angle tolerance quality < AT3 in accordance with DIN 7187 and DIN 2080
- Max. true running accuracy < 0.005 mm
- Additional versions available on request



DIN ISO 7388-1 / DIN 69871 AD/AF

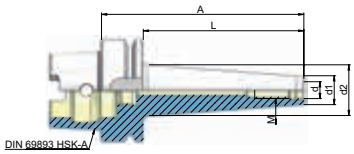
- Internal coolant supply

Shank	d mm	A mm	D mm	art.no.	€
SK 40	20	65	40	**434540** 4020	58,–
SK 40	25	70	45	434540 4025	52,–
SK 40	32	75	52	434540 4032	52,–
SK 50	20	70	40	434540 5020	82,–
SK 50	25	70	40	434540 5025	82,–
SK 50	32	70	52	434540 5032	82,–
SK 50	40	80	60	434540 5040	82,–
SK 50	50	90	75	434540 5050	92,–

4117

SARA® Tool holding fixtu es for screw-in milling cutters

- Taper angle tolerance AT3
- **Pre-balanced to G 2.5 / 25,000 rpm**
- True running accuracy of steep taper tool holder, DIN 69871: < 0.003 mm, HSK 63 A: < 0.005 mm
- MAS/BT-AD/AF version available on request



DIN69893 Form A (HSK-A)

- Internal coolant supply
- When machining with internal coolant supply, a coolant transfer pipe with art.no. 431011... should be used

Shank	Thread	D mm	d mm	A mm	L mm	art.no.	€
HSK 63	M6	13	10	51	25	**430236** 6061	155,–
HSK 63	M8	23	13	76	50	430236 6082	170,–
HSK 63	M8	23	13	101	75	430236 6083	186,–
HSK 63	M10	20	18	51	25	430236 6101	162,–
HSK 63	M10	23	18	76	50	430236 6102	177,–
HSK 63	M10	32	18	126	100	430236 6104	210,–
HSK 63	M12	24	21	51	25	430236 6121	162,–
HSK 63	M12	24	21	76	50	430236 6122	177,–
HSK 63	M12	31	21	101	75	430236 6123	191,–
HSK 63	M12	33	21	126	100	430236 6124	210,–
HSK 63	M12	40	21	176	150	430236 6126	250,–
HSK 63	M16	29	29	51	25	430236 6161	162,–
HSK 63	M16	34	29	76	50	430236 6162	177,–
HSK 63	M16	34	29	101	75	430236 6163	191,–
HSK 63	M16	36	29	126	100	430236 6164	210,–
HSK 63	M16	43	29	176	150	430236 6166	250,–

4117

Continued on next page >>>

DIN ISO 7388-1 / DIN 69871 AD

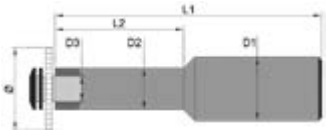
- Internal coolant supply

Shank	Thread	D mm	d mm	A mm	L mm	art.no.	€
SK 40	M6	13	10	44	25	**430235** 4061	86,50
SK 40	M6	20	10	69	50	430235 4062	99,–
SK 40	M6	23	10	94	75	430235 4063	108,–
SK 40	M8	15	13	44	25	430235 4081	86,50
SK 40	M8	23	13	69	50	430235 4082	99,–
SK 40	M8	23	13	94	75	430235 4083	108,–
SK 40	M10	20	18	44	25	430235 4101	86,–
SK 40	M10	23	18	69	50	430235 4102	94,–
SK 40	M10	28	18	94	75	430235 4103	108,–
SK 40	M12	24	21	44	25	430235 4121	86,–
SK 40	M12	24	21	69	50	430235 4122	94,–
SK 40	M12	31	21	94	75	430235 4123	108,–
SK 40	M16	29	29	44	25	430235 4161	89,–
SK 40	M16	34	29	69	50	430235 4162	99,–
SK 40	M16	34	29	94	75	430235 4163	108,–

4117

Saw blade holding fixtu es

- For holding saw blades from Ø 20 to Ø 100 mm
- Highly hardened and tempered
- Shank design in accordance with DIN 1835 B
- High true-running accuracy
- Supplied without disc milling cutter



Individual

for saw blade size	L1 mm	L2 mm	D1 mm	D2 mm	D3 mm	art.no.	€
20	75	30	10	10	5	**438082** 1020	98,–
20	90	30	20	10	5	438082 2020	89,50
25	88	48	10	13	8	438082 1025	98,–
25	100	42	20	13	8	438082 2025	89,50
32	93	53	10	16	8	438082 1032	98,–
32	105	53	20	16	8	438082 2032	89,50
40	100	60	10	19.5	10	438082 1040	98,–
40	110	60	20	19.5	10	438082 2040	89,50
50	126	78	16	24.5	13	438082 1650	98,–
50	136	78	25	24.5	13	438082 2550	89,50
63	126	78	16	24.5	16	438082 1663	98,–
63	136	78	25	24.5	16	438082 2563	89,50
80	142	92	20	34	22	438082 2080	134,50
80	150	92	25	34	22	438082 2580	123,–
100	142	92	20	39.5	22	438082 2010	134,50
100	150	92	25	39.5	22	438082 2510	123,–

4107

Set

Contents	art.no.	€
6 saw blade mounts for saw blade Ø 20 mm to 63 mm	**438083** 2506	539,–

4107

palbit Extension for modular milling cutter heads

Solid carbide extension

- Straight version
- **With internal coolant supply**

D mm	L mm	Thread	art.no.	€
12	100	M6	**430352** 1210	304,–
12	150	M6	430352 1215	249,–
16	100	M8	430352 1610	290,–
16	150	M8	430352 1615	345,–
20	150	M10	430352 2015	442,–
20	200	M10	430352 2020	552,–
25	150	M12	430352 2515	570,–
25	200	M12	430352 2520	777,–

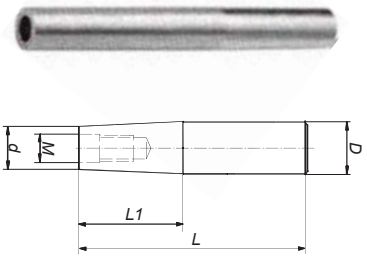
4201

Vibration-dampened

- Offs t straight shank
- without internal coolant supply

D mm	d mm	L mm	L1 mm	Thread	art.no.	€
12	9.8	90	40	M6	**430350** 1209	273,50
12	9.8	110	60	M6	430350 1211	320,–
12	9.8	130	80	M6	430350 1213	357,–
12	12.8	95	40	M8	430350 1609	282,75
16	12.8	115	60	M8	430350 1611	329,–
16	12.8	135	80	M8	430350 1613	365,75
16	12.8	155	100	M8	430350 1615	419,25
16	12.8	175	120	M8	430350 1617	456,–
20	15.8	100	40	M10	430350 2010	301,50
20	15.8	120	60	M10	430350 2012	338,25
20	15.8	140	80	M10	430350 2014	375,–
20	17.8	140	80	M10	430350 2015	375,–
20	15.8	160	100	M10	430350 2016	428,50
20	17.8	160	100	M10	430350 2017	428,50
20	15.8	180	120	M10	430350 2018	465,25
20	17.8	180	120	M10	430350 2019	465,25
25	20.8	125	60	M12	430350 2512	347,50
25	20.8	145	80	M12	430350 2514	400,50
25	20.8	165	100	M12	430350 2516	612,–

4201

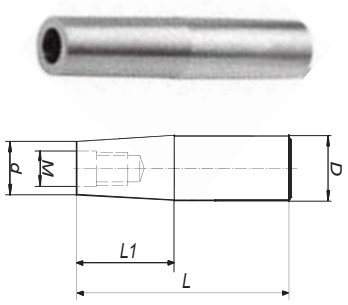


Steel extensions for modular milling cutter heads

- Offs t straight shank
- No internal coolant supply

D mm	d mm	L mm	L1 mm	Thread	art.no.	€
12	9.8	65	20	M6	**430351** 1206	92,–
16	12.8	88	40	M8	430351 1608	103,25
20	17.8	95	45	M10	430351 2010	109,25
25	20.8	106	50	M12	430351 2512	114,25
32	28.8	110	50	M16	430351 3216	120,50

4201



Shrinking technology ThermoGrip®

INFO

The aim to use **tools and tool holders** to create a unique that o¨ers the ideal conditions for machining. The advantage of **inductive shrinking technology** is that the high energy density applied in a very short time to the tool holder enables **even HSS tools** to be clamped. With the tool holders, it is particularly interesting to note that absolutely no clamping elements are required (clamping nuts etc.), which in turn enables slim constructions with a very high stability and a very low inherent imbalance.

We will be glad to send you further information on the full range of shrinking equipment upon request!

Advantages:

- Very high clamping forces
- Maximum true running accuracy 3µm thanks to centric clamping
- Higher service lives of tools and spindles
- Good surfaces thanks to high stability of tool clamping
- Good resistance to bending and radial forces, even with large projections
- Slender chuck form
- Symmetrical chuck
- Low imbalance

diebold ThermoGrip inductive shrinking unit MS502-P

- Gentle and targeted heating thanks to parameterised generator output
- Simple and secure handling
- Also suitable for standard chucks, Ø 3 to 16 mm
- Gentle heating thanks to controllable generator output
- Low heat output, cooling using air cooling unit is sufficie
- Only suitable for carbide shanks
- Supplied with 4 shielding rings and protective gloves, no tool holder

432725 0001

432725 0002

MS502 ThermoGrip inductive shrinking unit

Description	for Ø mm	Output kW	Connection	Weight kg	art.no.	€
With cooling unit	3 - 20	3	220V	17	**432725** 0002	4.048,–
Without cooling	3 - 20	3	220V	15	432725 0001	3.600,–

4129

Tool holders for MS502-P

Description	art.no.	€
Tool holder HSK 25	**432745** 0025	385,–
Tool holder HSK 32	432745 0032	397,–
Tool holder HSK 40	432745 0040	408,–
Tool holder HSK 50	432745 0050	408,–
Tool holder HSK 63	432745 0063	432,–
Tool holder SK 30	432745 0130	454,–
Tool holder SK 40	432745 0140	454,–

4129

diebold FKS 04S ThermoGrip cooling station

- Electronic-controlled liquid cooler for shrink-fit holde s
- Contour-independent cooling
- Cools, cleans and preserves holding fixtu es in a single operation, automatically at the push of a button
- Cycle time approx. 40 sec.
- Supplied with SK 40 tool holder and 1 litre of liquid coolant concentrate
- Please order necessary tool holder separately! (Hose and blow gun not included)
- No tool holder required for any HSK interfaces

FKS 04S cooling station

L mm	B mm	H mm	art.no.	€
450	320	632	**432728** 1001	2.310,–

4129

Accessories

Description	art.no.	€
Coolant concentrate 1 litre	**432729** 0006	17,70

4129

diebold ThermoGrip inductive shrinking unit ISG2430TLK

- **Inductive shrinking unit for shrinking carbide shanks of Ø 3 - 20 mm and HSS steel shanks Ø 6 - 20 mm**
- **Max. shrink-fit holder leng h 350 mm**
- The induction coil can be lowered manually and easily into the heating position, and locks into place automatically. Select the holding fixtu e type and tool Ø on the display panel and press the start button. Once complete, the coil is returned to the top by hand.
- Processor is loaded with shrinking parameters for all standard chucks
- Graphic display with simple menu navigation and interactive controls
- Manual shrink-fitting possibl
- When used together with the FKS04 cooling station, contour-independent cooling, cleaning and preserving can be carried out.
- Fan station for rapid tool cooling must be combined with a cooling adapter
- Air cooling starts automatically after the shrinking process is completed, but can be terminated by pressing the stop button.

- Supplied with induction coil and three interchangeable discs

ThermoGrip inductive shrinking unit ISG2430TLK

B mm	T mm	H mm	Connection	Output kW	art.no.	€
780	535	950	400V / 16A	8	**432726** 2020	5.810,–
					4129	

Tool holding fixtu es for ISG2400TLK

Description	art.no.	€
Tool holder SK 30/40	**432729** 0002	69,–
Tool holder SK 50	432729 0003	106,–
Tool holder HSK 25/32	432729 0004	69,–
Tool holder HSK 40/50	432729 0005	69,–
	4129	

diebold HS1100 / HS1100P ThermoGrip inductive shrinking unit

- **Inductive shrinking unit for shrinking carbide shanks of Ø 3 - 32 mm and HSS steel shanks Ø 6 - 32 mm**
- The modular design of the tool positioning system offe s the fl xibility to upgrade from HSK40 to HSK100 and SK30/BT30 to SK50/BT50
- The horizontal design of the device makes it easy to position the cutting tool
- Broken tools can be ejected with the integrated press-off fixt e
- Additional horizontal length adjusting fixtu e can be retrofitted at a y time for precise length adjustment.

- **Supplied with 4 shielding rings and protective gloves.**
- **Please order tool holding fixtu es separately**

ThermoGrip inductive shrinking unit

- HS1100 for manual shrinking
- HS1100P for parameterised shrinking

Design	B mm	H mm	Connection	T mm	Weight kg	Output kW	art.no.	€
HS1100	451	357	400V / 16A	600	36	11	**432750** 0001	5.570,–
HS1100P	451	357	400V / 16A	600	36	11	432750 0002	5.890,–
							4129	

Tool holding fixtu es for HS1100

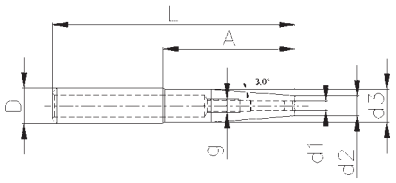
for tool holder	art.no.	€
HSK-63	**432751** 0063	496,–
SK40 / BT40	432751 0140	570,–
Universal clamp	432751 0001	1.032,–
	4129	

Digital length adjuster

suitable for	art.no.	€
HS1100	**432752** 0001	1.570,–
	4129	

diebold Shrink-fit xtensions

- Extend your shrink-fit hucks on a modular basis, as you need it!
- Best possible holding force
- Maximum slenderness ratio (3° draft)
- Almost monolithic form
- Further sizes available on request

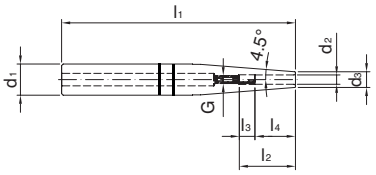


D mm	d1 mm	d2 mm	d3 mm	A mm	L mm	Thread	art.no.	€
12	3	9	11.8	63	110	-	**430229** 1203	112,–
12	4	10	11.8	63	110	-	430229 1204	112,–
12	5	11	11.8	63	110	-	430229 1205	112,–
12	6	12	17	63	110	M5	430229 1206	105,–
12	8	14	19	63	110	M6	430229 1208	105,–
16	3	9	13	60	110	M6	430229 1603	112,–
16	4	10	14	60	110	M6	430229 1604	112,–
16	5	11	15	58	110	M6	430229 1605	112,–
16	6	12	15.8	60	110	M5	430229 1606	105,–
16	8	14	19	60	110	M6	430229 1608	105,–
20	3	9	13	58	110	M6	430229 2003	112,–
20	4	10	14	58	110	M6	430229 2004	112,–
20	5	11	15	58	110	M6	430229 2005	112,–
20	6	12	16	58	110	M5	430229 2006	105,–
20	8	14	19	58	110	M6	430229 2008	105,–

4131

ATORN® Shrink-fit huck extension

- For extension and reduction to suit smaller diameters
- Slenderness ratio 4.5°
- For shank tolerance h6
- Tool stop screw with 10 mm adjustment range

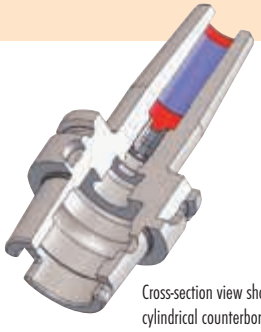


d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	l4 mm	G mm	Wr. width mm	art.no.	€
12	3	8	150			12			**430228** 1203	110,–
12	4	8	150			16			430228 1204	110,–
12	5	10	150			20			430228 1205	110,–
12	6	10	150	36	10	26	M5	2.5	430228 1206	99,–
16	3	10	150			12			430228 1603	110,–
16	4	10	150			16			430228 1604	110,–
16	5	10	150			20			430228 1605	110,–
16	6	10	150	36	10	26	M5	2.5	430228 1606	99,–
16	8	12	150	36	10	26	M6	3	430228 1608	99,–
20	3	10	150			12			430228 2003	110,–
20	4	10	150			16			430228 2004	110,–
20	5	10	150			20			430228 2005	110,–
20	6	10	150	36	10	26	M5	2.5	430228 2006	99,–
20	8	12	150	36	10	26	M6	3	430228 2008	99,–
20	10	14	150	42	10	32	M8x1	3	430228 2010	99,–
20	12	16	150	47	10	37	M10x1	5	430228 2012	99,–
25	3	10	150			12			430228 2503	110,–
25	4	10	150			16			430228 2504	110,–
25	5	15	150			20			430228 2505	110,–
25	6	20	150	36	10	26	M5	2.5	430228 2506	99,–
25	8	20	150	36	10	26	M6	3	430228 2508	99,–
25	10	20	150	42	10	32	M8x1	3	430228 2510	99,–
25	12	20	150	47	10	37	M10x1	5	430228 2512	99,–
25	14	20	150	47	10	37	M10x1	5	430228 2514	110,–
25	16	22	150	50	10	40	M10x1	5	430228 2516	99,–
32	6	20	150	36	10	26	M5	2.5	430228 3206	99,–
32	8	20	150	36	10	26	M6	3	430228 3208	99,–
32	10	24	150	42	10	32	M8x1	3	430228 3210	99,–
32	12	24	150	47	10	37	M10x1	5	430228 3212	99,–
32	14	27	150	47	10	37	M10x1	5	430228 3214	110,–
32	16	27	150	50	10	40	M10x1	5	430228 3216	99,–
32	18	27	150	50	10	40	M10x1	5	430228 3218	99,–
32	20	27	150	52	10	42	M10x1	5	430228 3220	99,–

4181

diebold ThermoGrip® shrink fit holde

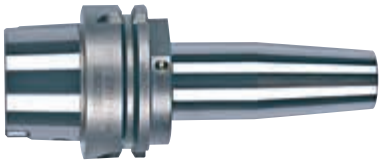
- Straight shank milling tools clamped with a high level of precision
- Tool shanks in accordance with DIN 6335 type HA, HB and HE. Tool shanks in accordance with DIN 1835 type A and B with shank tolerance h6 and Ra < 0.3
- **Patented counterbore from Ø 6 mm for an automatic shrink-fit p ocess**

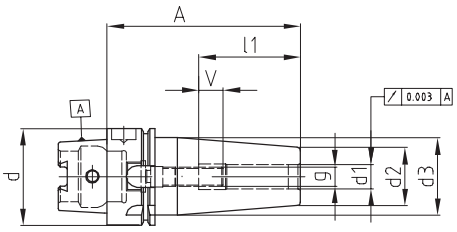


Cross-section view shows the patented cylindrical counterbore (red)

HSK A DIN 69893

- Internal coolant supply
- When machining with internal coolant supply, a coolant transfer pipe with art.no. 431011... should be used
- Balanced at 24,000 rpm



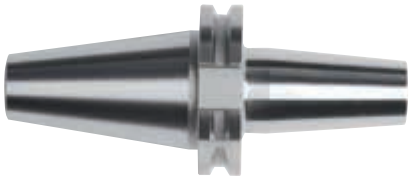


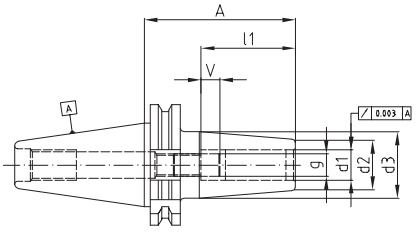
Shank	Clamp Ø mm	d2 mm	d3 mm	l1 mm	A mm	Thread	art.no.	€
HSK-A 63	3	15	20	20	90	M6	**430218** 6303	155,–
HSK-A 63	4	15	20	20	90	M6	430218 6304	155,–
HSK-A 63	5	15	25	25	90	M6	430218 6305	155,–
HSK-A 63	6	20	27	36	80	M5	430218 6306	139,–
HSK-A 63	6	20	27	36	90	M5	430218 6406	139,–
HSK-A 63	6	20	27	36	120	M5	430218 6506	176,–
HSK-A 63	6	20	32	36	160	M5	430218 6606	198,–
HSK-A 63	8	20	27	36	80	M6	430218 6308	139,–
HSK-A 63	8	20	27	36	90	M6	430218 6408	139,–
HSK-A 63	8	20	27	36	120	M6	430218 6508	176,–
HSK-A 63	8	20	32	36	160	M6	430218 6608	198,–
HSK-A 63	10	24	32	42	85	M8x1	430218 6310	139,–
HSK-A 63	10	24	32	42	90	M8x1	430218 6410	139,–
HSK-A 63	10	24	32	42	120	M8x1	430218 6510	176,–
HSK-A 63	10	24	34	42	160	M8x1	430218 6610	198,–
HSK-A 63	12	24	32	47	90	M10x1	430218 6312	139,–
HSK-A 63	12	24	32	47	120	M10x1	430218 6512	176,–
HSK-A 63	12	24	34	47	160	M10x1	430218 6612	198,–
HSK-A 63	14	27	34	47	90	M10x1	430218 6314	139,–
HSK-A 63	14	27	34	47	120	M10x1	430218 6414	176,–
HSK-A 63	14	27	42	47	160	M10x1	430218 6514	198,–
HSK-A 63	16	27	34	50	95	M12x1	430218 6316	139,–
HSK-A 63	16	27	34	50	120	M12x1	430218 6516	176,–
HSK-A 63	16	27	42	50	160	M12x1	430218 6616	198,–
HSK-A 63	18	33	42	50	95	M12x1	430218 6318	139,–
HSK-A 63	18	33	42	50	120	M12x1	430218 6418	176,–
HSK-A 63	18	33	51	50	160	M12x1	430218 6518	198,–
HSK-A 63	20	33	42	52	100	M16x1	430218 6320	139,–
HSK-A 63	20	33	42	52	120	M16x1	430218 6520	176,–
HSK-A 63	20	33	51	52	160	M16x1	430218 6620	198,–
HSK-A 63	25	44	53	58	115	M16x1	430218 6325	139,–
HSK-A 63	25	44	53	58	160	M16x1	430218 6425	198,–
HSK-A 63	32	44	53	62	120	M16x1	430218 6532	176,–
HSK-A 63	32	44	53	62	160	M16x1	430218 6632	198,–

4131

DIN ISO 7388-1 / DIN 69871 AD/AF

- Internal coolant supply
- Balanced at 18,000 rpm





Shank	Clamp Ø mm	d2 mm	d3 mm	l1 mm	A mm	Thread	V mm	art.no.	€
SK 40	3	15	20	20	80	M6	5	**430216** 4003	146,–
SK 40	4	15	20	20	80	M6	5	430216 4004	146,–
SK 40	5	15	20	25	80	M6	5	430216 4005	146,–
SK 40	6	20	27	36	80	M5	10	430216 4006	113,–
SK 40	6	20	32	36	160	M5	10	430216 4106	153,–
SK 40	8	20	27	36	80	M6	10	430216 4008	113,–
SK 40	8	20	32	36	160	M6	10	430216 4108	153,–
SK 40	10	24	32	42	80	M8x1	10	430216 4010	113,–
SK 40	10	24	34	42	160	M8x1	10	430216 4110	153,–

4131

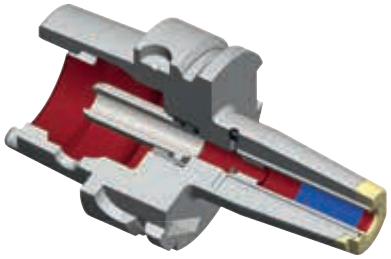
Continued on next page >>>

Shank	Clamp Ø mm	d2 mm	d3 mm	l1 mm	A mm	Thread	V mm	art.no.	€
SK 40	12	24	32	47	80	M10x1	10	430216 4012	113,–
SK 40	12	24	34	47	160	M10x1	10	430216 4212	153,–
SK 40	14	27	34	47	80	M10x1	10	430216 4014	113,–
SK 40	14	27	42	47	160	M10x1	10	430216 4114	153,–
SK 40	16	27	34	50	80	M12x1	10	430216 4016	113,–
SK 40	16	27	42	50	160	M12x1	10	430216 4216	153,–
SK 40	18	33	42	50	80	M12x1	10	430216 4018	113,–
SK 40	18	33	50	50	160	M12x1	10	430216 4118	153,–
SK 40	20	33	42	52	80	M16x1	10	430216 4020	113,–
SK 40	20	33	50	52	160	M16x1	10	430216 4220	153,–
SK 40	25	44	50	58	100	M16x1	10	430216 4025	113,–
SK 40	32	44	50	62	100	M16x1	10	430216 4032	113,–

4131

diebold JetSleeve 2® ThermoGrip® shrink fit holde s

- **Revolutionary solution for mould engineering and HSC machining**
- **Standard version suitable for air and cooling lubricant, versions for minimum volume lubrication available on request**
- The coolant is fed via various nozzles directly to the cutting edge. Chips are blown away and not run through.
- Up to 300 % higher endurance
- No surface scratching by chips
- Optimum tool holder cooling right through to the cutting edge
- **Innovation in the JetSleeve 2®**
  Rotating chuck with media duct, the milling machine does not need to be retrofitte .Pressure is built up in the nozzle unit, and the fl w effect f om the nozzles keeps the coolant jet on the milling cutter shank at all times. JetSleeve chucks can be used on all conventional milling machines with internal coolant supply
- Suitable for all agents: air, minimum volume lubrication, cutting flui
- Energy-efficient and vironmentally friendly
- **Shrinking with screwed-on nozzle cover possible**

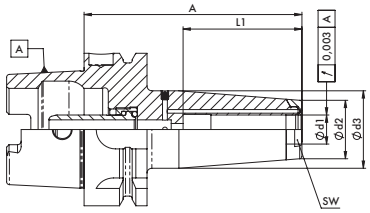


HSK A DIN 69893

- Internal coolant supply
- When machining with internal coolant supply, a coolant transfer pipe with art.no. 431011... should be used

Shank	d1 mm	d2 mm	d3 mm	L1 mm	A mm	Wr. width mm	art.no.	€
HSK-A 63	3	15	20	20	90	13	**430331** 6303	306,–
HSK-A 63	4	15	20	20	90	13	430331 6304	306,–
HSK-A 63	6	21	27	36	80	17	430331 6306	293,–
HSK-A 63	8	21	27	36	80	17	430331 6308	293,–
HSK-A 63	10	24	32	42	85	20	430331 6310	293,–
HSK-A 63	12	24	32	47	90	20	430331 6312	293,–
HSK-A 63	16	33	34	50	95	29	430331 6316	293,–
HSK-A 63	20	44	42	52	100	40	430331 6320	293,–

4129

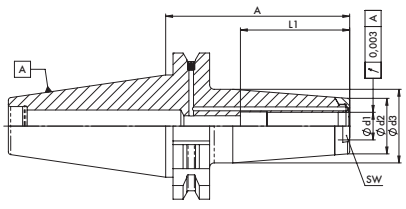


DIN ISO 7388-1 / DIN 69871 AD

- Internal coolant supply

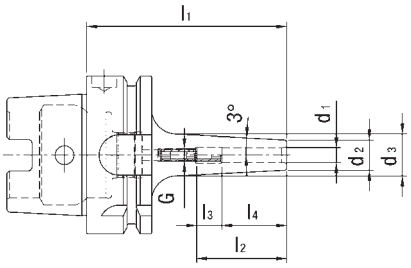
Shank	d1 mm	d2 mm	d3 mm	L1 mm	A mm	Wr. width mm	art.no.	€
SK 40	3	15	20	20	80	13	**430330** 4003	281,–
SK 40	4	15	20	20	80	13	430330 4104	281,–
SK 40	6	21	27	36	80	17	430330 4206	264,–
SK 40	8	21	27	36	80	17	430330 4308	264,–
SK 40	10	24	32	42	80	20	430330 4410	264,–
SK 40	12	24	32	47	80	20	430330 4512	264,–
SK 40	16	33	34	50	80	29	430330 4616	264,–
SK 40	20	44	42	52	80	40	430330 4620	264,–

4129



ATORN® Shrink fit holding fixt es 3°, slim version

- High torque transfer
- High true running accuracies 0.003 mm
- 3° range, slim version
- High contour fl xibility
- Heat-resistant mild steel
- Further shank designs available on request
- **Balanced to G 2.5 / 25,000 rpm**
- With Balluff hip bore



HSK-A DIN 69893

- Internal coolant supply
- When machining with internal coolant supply, a coolant transfer pipe Article No. 431011.... should be used

Shank	d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	l4 mm	G mm	Wr. width mm	Weight kg	art.no.	€
HSK 63	3	9	14	80	28	16	12	M6	2	0.7	**440431** 0003	162,–
HSK 63	3	9	16	120			12			0.8	440431 1203	182,–
HSK 63	3	9	19	160			12			0.8	440431 1603	204,–
HSK 63	3	9	19	200			12			0.9	440431 2003	226,–
HSK 63	4	10	15	80	28	12	16	M6	2	0.7	440431 0004	162,–
HSK 63	4	10	17	120			16			0.8	440431 1204	176,–
HSK 63	4	10	20	160			16			0.9	440431 1604	202,–
HSK 63	4	10	20	200			16			0.95	440431 2004	220,–
HSK 63	5	11	16	80	30	10	20	M6	2	0.7	440431 0005	162,–
HSK 63	5	11	18	120			20			0.8	440431 1205	176,–
HSK 63	5	11	21	160			20			0.9	440431 1605	202,–
HSK 63	5	11	21	200			20			1	440431 2005	220,–
HSK 63	6	12	17	80	36	10	26	M5	2.5	0.7	440431 0006	146,–
HSK 63	6	12	21	120	36	10	26	M5	2.5	0.8	440431 1206	158,–
HSK 63	6	12	24	160	36	10	26	M5	2.5	0.9	440431 1606	182,–
HSK 63	6	12	24	200	36	10	26	M5	2.5	1	440431 2006	202,–
HSK 63	8	14	19	80	36	10	26	M6	3	0.7	440431 0008	146,–
HSK 63	8	14	23	120	36	10	26	M6	3	0.8	440431 1208	158,–
HSK 63	8	14	26	160	36	10	26	M6	3	1	440431 1608	182,–
HSK 63	8	14	26	200	36	10	26	M6	3	1.1	440431 2008	202,–
HSK 63	10	16	21	85	41	10	31	M8x1	3	0.8	440431 0010	146,–
HSK 63	10	16	25	120	41	10	31	M8x1	3	0.9	440431 1210	158,–
HSK 63	10	16	28	160	41	10	31	M8x1	3	1	440431 1610	182,–
HSK 63	10	16	28	200	41	10	31	M8x1	3	1.2	440431 2010	202,–
HSK 63	12	18	24	90	47	10	37	M10x1	5	0.8	440431 0012	146,–
HSK 63	12	18	27	120	47	10	37	M10x1	5	0.9	440431 1212	158,–
HSK 63	12	18	30	160	47	10	37	M10x1	5	1.1	440431 1612	182,–
HSK 63	12	18	30	200	47	10	37	M10x1	5	1.3	440431 2012	202,–
HSK 63	14	20	26	90	47	10	37	M10x1	5	0.8	440431 0014	146,–
HSK 63	14	20	29	120	47	10	37	M10x1	5	1	440431 1214	158,–
HSK 63	14	20	32	160	47	10	37	M10x1	5	1.2	440431 1614	182,–
HSK 63	14	20	32	200	47	10	37	M10x1	5	1.4	440431 2014	202,–
HSK 63	16	22	28	95	50	10	40	M12x1	5	0.8	440431 0016	146,–
HSK 63	16	22	31	120	50	10	40	M12x1	5	1	440431 1216	158,–
HSK 63	16	22	34	160	50	10	40	M12x1	5	1.2	440431 1616	182,–
HSK 63	16	22	34	200	50	10	40	M12x1	5	1.5	440431 2016	202,–
HSK 63	18	24	30	95	50	10	40	M12x1	5	0.9	440431 0018	146,–
HSK 63	18	24	33	120	50	10	40	M12x1	5	1	440431 1218	158,–
HSK 63	18	24	36	160	50	10	40	M12x1	5	1.3	440431 1618	182,–
HSK 63	18	24	36	200	50	10	40	M12x1	5	1.6	440431 2018	202,–
HSK 63	20	26	33	100	52	10	42	M16x1	5	0.9	440431 0020	146,–
HSK 63	20	26	35	120	52	10	42	M16x1	5	1.1	440431 1220	158,–
HSK 63	20	26	38	160	52	10	42	M16x1	5	1.4	440431 1620	182,–
HSK 63	20	26	38	200	52	10	42	M16x1	8	1.7	440431 2020	202,–

4181

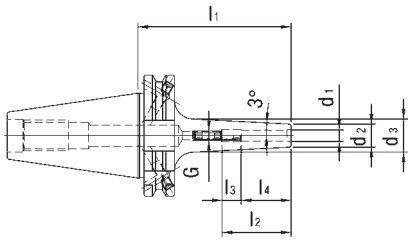
Continued on next page >>>

DIN ISO 7388-1 / DIN 69871 AD/AF

- Internal coolant supply

Shank	d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	l4 mm	G mm	Wr. width mm	Weight kg	art.no.	€
SK 40	3	9	14	80	28	16	12	M6	2	0.9	**440430** 0003	152,–
SK 40	3	9	16	120			12			0.9	440430 1203	178,–
SK 40	3	9	19	160			12			1.1	440430 1603	204,–
SK 40	3	9	19	200			12			1.2	440430 2003	220,–
SK 40	4	10	15	80	28	12	16	M6	2	0.9	440430 0004	146,–
SK 40	4	10	17	120			16			0.9	440430 1204	174,–
SK 40	4	10	20	160			16			1.1	440430 1604	199,–
SK 40	4	10	20	200			16			1.2	440430 2004	216,–
SK 40	5	11	16	80	30	10	20	M6	2	0.9	440430 0005	146,–
SK 40	5	11	18	120			20			1	440430 1205	174,–
SK 40	5	11	21	160			20			1.1	440430 1605	199,–
SK 40	5	11	21	200			20			1.2	440430 2005	216,–
SK 40	6	12	17	80	36	10	26	M5	2.5	0.9	440430 0006	128,–
SK 40	6	12	22	120	36	10	26	M5	2.5	1	440430 1206	156,–
SK 40	6	12	24	160	36	10	26	M5	2.5	1.1	440430 1606	180,–
SK 40	6	12	24	200	36	10	26	M5	2.5	1.4	440430 2006	196,–
SK 40	8	14	19	80	36	10	26	M6	3	0.9	440430 0008	128,–
SK 40	8	14	24	120	36	10	26	M6	3	1	440430 1208	156,–
SK 40	8	14	26	160	36	10	26	M6	3	1.2	440430 1608	180,–
SK 40	8	14	26	200	36	10	26	M6	3	1.4	440430 2008	196,–
SK 40	10	16	21	80	41	10	31	M8x1	3	0.9	440430 0010	128,–
SK 40	10	16	26	120	41	10	31	M8x1	3	1.1	440430 1210	156,–
SK 40	10	16	28	160	41	10	31	M8x1	3	1.2	440430 1610	180,–
SK 40	10	16	28	200	41	10	31	M8x1	3	1.6	440430 2010	196,–
SK 40	12	18	23	80	47	10	37	M10x1	5	0.9	440430 0012	128,–
SK 40	12	18	28	120	47	10	37	M10x1	5	1.1	440430 1212	156,–
SK 40	12	18	30	160	47	10	37	M10x1	5	1.3	440430 1612	180,–
SK 40	12	18	30	200	47	10	37	M10x1	5	1.5	440430 2012	196,–
SK 40	14	20	26	80	47	10	37	M10x1	5	0.9	440430 0014	128,–
SK 40	14	20	30	120	47	10	37	M10x1	5	1.1	440430 1214	156,–
SK 40	14	20	32	160	47	10	37	M10x1	5	1.3	440430 1614	180,–
SK 40	14	20	32	200	47	10	37	M10x1	5	1.6	440430 2014	196,–
SK 40	16	22	28	80	50	10	40	M12x1	5	1	440430 0016	128,–
SK 40	16	22	32	120	50	10	40	M12x1	5	1.2	440430 1216	156,–
SK 40	16	22	34	160	50	10	40	M12x1	5	1.4	440430 1616	180,–
SK 40	16	22	34	200	50	10	40	M12x1	5	2.6	440430 2016	196,–
SK 40	18	24	30	80	50	10	40	M12x1	5	1	440430 0018	128,–
SK 40	18	24	34	120	50	10	40	M12x1	5	1.2	440430 1218	156,–
SK 40	18	24	36	160	50	10	40	M12x1	5	1.5	440430 1618	180,–
SK 40	18	24	36	200	50	10	40	M12x1	5	2.8	440430 2018	196,–
SK 40	20	26	32	80	52	10	42	M16x1	8	1	440430 0020	128,–
SK 40	20	26	36	120	52	10	42	M16x1	8	1.2	440430 1220	156,–
SK 40	20	26	38	160	52	10	42	M16x1	8	1.6	440430 1620	180,–
SK 40	20	26	38	200	52	10	42	M16x1	8	2.9	440430 2020	196,–

4181



Heavy machining

Shrink-fit mounts with coolant bores for heavy-duty machining available on request!

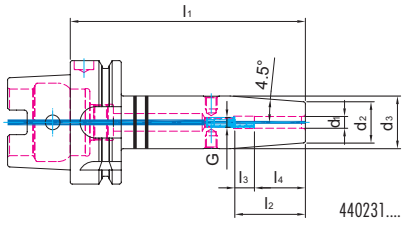
Size and shape result in a high degree of passive vibration damping.

ATORN® Shrink-fit holding fixt es 4.5°

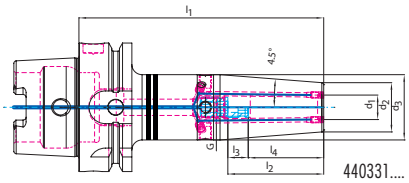
- High true running accuracy of below 0.003 mm
- Highest dimensional accuracy of the workpiece
- High torque transfer
- 4.5° range
- High contour fl xibility
- Heat-resistant mild steel
- **Balanced to G 2.5 / 25,000 rpm**
- With Balluff hip bore

HSK-A DIN 69893

- Internal coolant supply
- When machining with internal coolant supply, a coolant transfer pipe Article No. 431011.... should be used



440231....



440331....

Shank	d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	l4 mm	G mm	Wr. width mm	Weight kg	Standard art.no.	€	With coolant bores art.no.	€
HSK 63	3	10	15	80	28	16	12	M6	2	0.7	**440231** 0308	161,–	**440331** 0308	178,–
HSK 63	4	15	22	80	28	12	16	M6	2	0.7	440231 0408	161,–	440331 0408	178,–
HSK 63	5	15	22	80	30	10	20	M6	2	0.7	440231 0508	161,–	440331 0508	178,–
HSK 63	6	21	27	80	36	10	26	M5	2.5	0.8	440231 0608	132,–	440331 0608	152,–
HSK 63	8	21	27	80	36	10	26	M6	3	0.8	440231 0808	132,–	440331 0808	152,–
HSK 63	10	24	32	85	41	10	31	M8x1	3	0.9	440231 1008	132,–	440331 1008	152,–
HSK 63	12	24	32	90	47	10	37	M10x1	5	0.9	440231 1209	132,–	440331 1208	152,–
HSK 63	14	27	34	90	47	10	37	M10x1	5	0.9	440231 1409	132,–	440331 1409	152,–
HSK 63	16	27	34	95	50	10	40	M12x1	5	1	440231 1609	132,–	440331 1609	152,–
HSK 63	18	33	42	95	50	10	40	M12x1	5	1.1	440231 1809	132,–	440331 1809	152,–
HSK 63	20	33	42	100	52	10	42	M16x1	5	1.1	440231 2010	132,–	440331 2010	152,–
HSK 63	3	10	20	120	-	-	12	-	-	0.8	440231 0312	210,–	440331 0312	226,–
HSK 63	4	15	22	120	-	-	16	-	-	0.8	440231 0412	210,–	440331 0412	226,–
HSK 63	5	15	22	120	-	-	20	-	-	0.8	440231 0512	210,–	440331 0512	226,–
HSK 63	6	21	27	120	36	10	26	M5	2.5	1	440231 0612	162,–	440331 0612	214,–
HSK 63	8	21	27	120	36	10	26	M6	3	1	440231 0812	162,–	440331 0812	214,–
HSK 63	10	24	32	120	41	10	31	M8x1	3	1	440231 1012	162,–	440331 1012	214,–
HSK 63	12	24	32	120	47	10	37	M10x1	5	1	440231 1212	162,–	440331 1212	214,–
HSK 63	14	27	34	120	47	10	37	M10x1	5	1.1	440231 1412	162,–	440331 1412	214,–
HSK 63	16	27	34	120	50	10	40	M12x1	5	1.1	440231 1612	162,–	440331 1612	214,–
HSK 63	18	33	42	120	50	10	40	M12x1	5	1.3	440231 1812	162,–	440331 1812	214,–
HSK 63	20	33	42	120	52	10	42	M16x1	5	1.3	440231 2012	162,–	440331 2012	214,–
HSK 63	25	44	53	115	58	10	48	M16x1	5	1.6	440231 2512	132,–	440331 2512	152,–
HSK 63	32	44	53	120	62	10	52	M16x1	5	1.6	440231 3212	132,–	440331 3212	152,–
HSK 63	3	10	20	160	-	-	12	-	-	0.8	440231 0316	224,–		
HSK 63	4	15	22	160	-	-	16	-	-	0.9	440231 0416	224,–		
HSK 63	5	15	22	160	-	-	20	-	-	0.9	440231 0516	224,–		
HSK 63	6	21	27	160	36	10	26	M5	2.5	1.1	440231 0616	178,–		
HSK 63	8	21	27	160	36	10	26	M6	3	1.1	440231 0816	178,–		
HSK 63	10	24	32	160	41	10	31	M8x1	3	1.3	440231 1016	178,–		
HSK 63	12	24	32	160	47	10	37	M10x1	5	1.2	440231 1216	178,–		
HSK 63	14	27	34	160	47	10	37	M10x1	5	1.3	440231 1416	178,–		
HSK 63	16	27	34	160	50	10	40	M12x1	5	1.4	440231 1616	178,–		
HSK 63	18	33	42	160	50	10	40	M12x1	5	1.6	440231 1816	178,–		
HSK 63	20	33	42	160	52	10	42	M16x1	5	1.6	440231 2016	178,–		
HSK 63	25	44	53	160	62	10	48	M16x1	5	2	440231 2516	178,–		
HSK 63	32	44	53	160	62	10	52	M16x1	5	1.9	440231 3216	178,–		
HSK 63	3	10	20	200	-	-	12	-	-	1	440231 0320	234,–		
HSK 63	4	15	22	200	-	-	16	-	-	1	440231 0420	234,–		
HSK 63	5	15	22	200	-	-	20	-	-	1.1	440231 0520	234,–		
HSK 63	6	21	27	200	36	10	26	M5	2.5	1.4	440231 0620	208,–		
HSK 63	8	21	27	200	36	10	26	M6	3	1.4	440231 0820	208,–		
HSK 63	10	24	32	200	41	10	31	M8x1	3	1.6	440231 1020	208,–		
HSK 63	12	24	32	200	47	10	37	M10x1	5	1.6	440231 1220	208,–		
HSK 63	14	27	34	200	47	10	37	M10x1	5	1.7	440231 1420	208,–		
HSK 63	16	27	34	200	50	10	40	M12x1	5	1.7	440231 1620	208,–		
HSK 63	18	33	42	200	50	10	40	M12x1	5	2.3	440231 1820	208,–		
HSK 63	20	33	42	200	52	10	42	M16x1	5	2.3	440231 2020	208,–		
HSK 63	25	44	53	200	62	10	48	M16x1	5	3.2	440231 2520	208,–		
HSK 63	32	44	53	200	62	10	52	M16x1	5	3	440231 3220	208,–		

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Continued on next page >>>

DIN ISO 7388-1 / DIN 69871 AD/AF

- Internal coolant supply

Shank	d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	l4 mm	G mm	Wr. width mm	Weight kg	Standard art.no.	€	With coolant bores art.no.	€
SK 40	3	10	17	80	28	16	12	M6	2	0.9	**440230** 0308	139,–	**440330** 0308	174,–
SK 40	4	15	22	80	28	12	16	M6	2	0.9	440230 0408	139,–	440330 0408	174,–
SK 40	5	15	22	80	30	10	20	M6	2	0.9	440230 0508	139,–	440330 0508	174,–
SK 40	6	21	27	80	36	10	26	M5	2.5	1	440230 0608	105,–	440330 0608	128,–
SK 40	8	21	27	80	36	10	26	M6	3	1	440230 0808	105,–	440330 0808	128,–
SK 40	10	24	32	80	41	10	31	M8x1	3	1	440230 1008	105,–	440330 1008	128,–
SK 40	12	24	32	80	47	10	37	M10x1	5	1	440230 1208	105,–	440330 1208	128,–
SK 40	14	27	34	80	47	10	37	M10x1	5	1	440230 1408	105,–	440330 1408	128,–
SK 40	16	27	34	80	50	10	40	M12x1	5	1	440230 1608	105,–	440330 1608	128,–
SK 40	18	33	42	80	50	10	40	M12x1	5	1.1	440230 1808	105,–	440330 1808	128,–
SK 40	20	33	42	80	52	10	42	M16x1	8	1.1	440230 2008	105,–	440330 2008	128,–
SK 40	25	44	53	100	58	10	48	M16x1	8	1.6	440230 2508	105,–	440330 2508	128,–
SK 40	32	44	53	100	62	10	52	M16x1	8	1.4	440230 3208	105,–	440330 3208	128,–
SK 40	3	10	20	120	-	-	12	-	-	0.9	440230 0312	154,–	440330 0312	194,–
SK 40	4	15	22	120	-	-	16	-	-	1	440230 0412	154,–	440330 0412	194,–
SK 40	5	15	22	120	-	-	20	-	-	1	440230 0512	154,–	440330 0512	194,–
SK 40	6	21	27	120	36	10	26	M5	2.5	1.1	440230 0612	134,–	440330 0612	162,–
SK 40	8	21	27	120	36	10	26	M6	3	1.1	440230 0812	134,–	440330 0812	162,–
SK 40	10	24	32	120	41	10	31	M8x1	3	1.2	440230 1012	134,–	440330 1012	162,–
SK 40	12	24	32	120	47	10	37	M10x1	5	1.2	440230 1212	134,–	440330 1212	162,–
SK 40	14	27	34	120	47	10	37	M10x1	5	1.3	440230 1412	134,–	440330 1412	162,–
SK 40	16	27	34	120	50	10	40	M12x1	5	1.3	440230 1612	134,–	440330 1612	162,–
SK 40	18	33	42	120	50	10	40	M12x1	5	1.5	440230 1812	134,–	440330 1812	162,–
SK 40	20	33	42	120	52	10	42	M16x1	8	1.5	440230 2012	134,–	440330 2012	162,–
SK 40	25	44	53	120	58	10	48	M16x1	8	1.8	440230 2512	134,–	440330 2512	162,–
SK 40	32	44	53	120	62	10	52	M16x1	8	1.7	440230 3212	134,–	440330 3212	162,–
SK 40	3	10	20	160	-	-	12	-	-	1	440230 0316	158,–		
SK 40	4	15	22	160	-	-	16	-	-	1.1	440230 0416	158,–		
SK 40	5	15	22	160	-	-	20	-	-	1.1	440230 0516	158,–		
SK 40	6	21	27	160	36	10	26	M5	2.5	1.3	440230 0616	142,–		
SK 40	8	21	27	160	36	10	26	M6	3	1.3	440230 0816	142,–		
SK 40	10	24	32	160	41	10	31	M8x1	3	1.5	440230 1016	142,–		
SK 40	12	24	32	160	47	10	37	M10x1	5	1.5	440230 1216	142,–		
SK 40	14	27	34	160	47	10	37	M10x1	5	1.6	440230 1416	142,–		
SK 40	16	27	34	160	50	10	40	M12x1	5	1.6	440230 1616	142,–		
SK 40	18	33	42	160	50	10	40	M12x1	5	1.7	440230 1816	142,–		
SK 40	20	33	42	160	52	10	42	M16x1	8	1.8	440230 2016	142,–		
SK 40	25	44	53	160	58	10	48	M16x1	8	2.5	440230 2516	142,–		
SK 40	32	44	53	160	62	10	52	M16x1	8	2.4	440230 3216	142,–		
SK 40	3	10	20	200	-	-	12	-	-	1.1	440230 0320	182,–		
SK 40	4	15	22	200	-	-	16	-	-	1.2	440230 0420	182,–		
SK 40	5	15	22	200	-	-	20	-	-	1.2	440230 0520	182,–		
SK 40	6	21	27	200	36	10	26	M5	2.5	1.4	440230 0620	158,–		
SK 40	8	21	27	200	36	10	26	M6	3	1.4	440230 0820	158,–		
SK 40	10	24	32	200	41	10	31	M8x1	3	1.7	440230 1020	158,–		
SK 40	12	24	32	200	47	10	37	M10x1	5	1.7	440230 1220	158,–		
SK 40	14	27	34	200	47	10	37	M10x1	5	1.8	440230 1420	158,–		
SK 40	16	27	34	200	50	10	40	M12x1	5	1.8	440230 1620	158,–		
SK 40	18	33	42	200	50	10	40	M12x1	5	1.9	440230 1820	158,–		
SK 40	20	33	42	200	52	10	42	M16x1	8	2	440230 2020	158,–		
SK 40	25	44	53	200	58	10	48	M16x1	8	2.8	440230 2520	158,–		
SK 40	32	44	53	200	62	10	52	M16x1	8	3.2	440230 3220	158,–		
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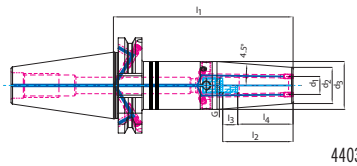

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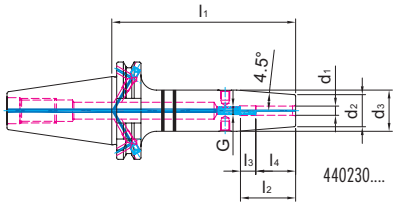


440230....

diebold ThermoGrip® Shrink fit coll ts TER

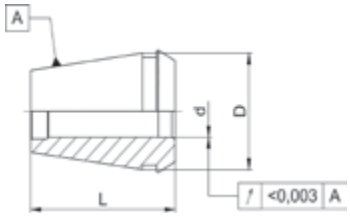
- Optimum concentricity < 3 µm
- Good changeover accuracy
- Maximum holding forces
- Excellent dimensional stability
- **Use in collet chucks**
  Standard ER chucks with standard clamping nuts can be used. The collet is coolant-proof, no dirt in the slots means no soiling to the clamping taper.
  Use in powered tool holders
  Clamped as short as possible, extremely rigid, no unwanted movement of the cutting tool, maximum production accuracy
  Use directly in the machine spindle
  High changeover accuracy, minimal imbalance, very short design

Use e.g. in collet chucks or powered tool holding fixtu es

Shrink-fit coll ts TER in accordance with DIN 6499

Type	d mm	D mm	L mm	art.no.	€
TER16	3	17	31	**430270** 0317	77,–
TER16	4	17	31	430270 0325	77,–
TER16	6	17	31	430270 0417	70,–
TER16	8	17	31	430270 0425	70,–
TER20	6	21	31	430270 0617	73,–
TER20	8	21	31	430270 0620	73,–
TER20	10	21	31	430270 0625	73,–
TER25	3	26	35	430270 0632	84,–
TER25	4	26	35	430270 0817	84,–
TER25	6	26	35	430270 0820	84,–
TER25	8	26	35	430270 0825	84,–
TER25	10	26	35	430270 0832	84,–
TER25	12	26	35	430270 1020	84,–
TER25	14	26	35	430270 1025	84,–
TER25	16	26	35	430270 1032	84,–
TER32	6	33	40	430270 1225	91,–
TER32	8	33	40	430270 1232	91,–
TER32	10	33	40	430270 1425	91,–
TER32	12	33	40	430270 1432	91,–
TER32	14	33	40	430270 1625	91,–
TER32	16	33	40	430270 1632	91,–
TER32	18	33	40	430270 1832	91,–
TER32	20	33	40	430270 2032	91,–

4129



Inserts for TER collets

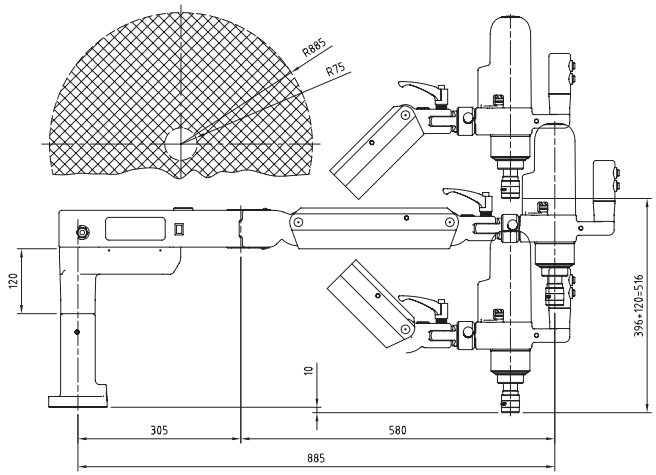
- Only for vertical shrinking units
- Available on request for horizontal shrinking units

for type	art.no.	€
TER16	**430290** 0016	73,–
TER20	430290 0020	73,–
TER25	430290 0025	73,–
TER32	430290 0032	73,–

4129

ATORN® Thread cutting machine

- **Electrically powered motor**
- 220 V electrical connection is sufficie
- For M2 - M14 steel threads
- For M2 - M16 aluminium threads
- Vertical and horizontal thread cutting
- Operating range - radius 75 mm to 885 mm
- Operating range - height 565 mm
- For holding quick-release inserts with Ø 19 (e.g. art.no. 44250519..)
- Supplied with a base tool holding fixtu e, an articulated arm for vertical thread cutting and a tilting adapter for horizontal thread cutting **(please order quick-change chucks or quick-release inserts separately)**
- **Automatic tool lubrication and pneumatic version available on request**



Thread cutting machine

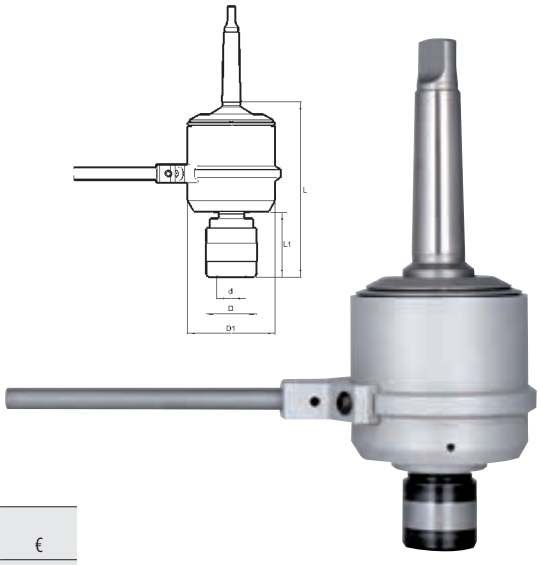
Rotational speed r/min	Torque N-m	Holding fixtu e Ø mm	Connection	art.no.	€
300/600	34	19	220V	**442180** 0001	4.999,–
				4126	

Accessories

Designation	art.no.	€
Table clamp	**442181** 0001	139,–
	4126	

SARA® Thread cutting device

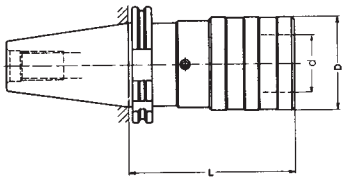
- Manual thread cutting on hand-fed drills
- Maintenance-free, for use with right-hand and left-hand threads
- No need to reverse the spindle thanks to the integrated indexable thread
- Automatic shut-off y a low-wear ball system when the machine spindle is withdrawn once the thread depth has been reached
- Stopping arm must be secured against twisting before operation
- Supplied without inserts



Shank	d mm	D mm	D1 mm	L mm	L1 mm	Length compensation, pressure mm	Length compensation, tension mm	material	art.no.	€
MT 2	19	33	78	146	40	0	3.5	M3 - M12	**442200** 1202	499,–
MT3	19	33	78	144	40	0	3.5	M3 - M12	442200 1203	499,–
MT3	31	50	83	180	67	0	0	M6 - M20	442200 2003	589,–
MT 4	31	50	83	181	40	0	0	M6 - M20	442200 2004	589,–
									4126	

SARA® Thread cutting quick-change chuck

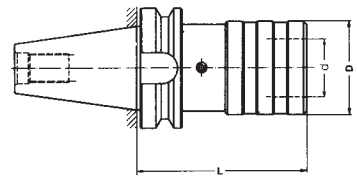
- Automatic insert locking
- **Flexible length compensation under compression and tension**
- For quick-release inserts with adjustable safety coupling
- Minimal residual torque prevents tap breakage
- For thread cutting on mechanical and digitally controlled radial drills as well as drilling and milling machines
- Further sizes are available on request



DIN ISO 7388-1 / DIN 69871 A

Shank	d mm	D mm	A mm	L mm	Length compensation, pressure mm	Length compensation, tension mm	Thread	art.no.	€
SK 40	19	38	60	60	9	9	M 3 - M 12	**442003** 4012	177,–
SK 40	31	55	100	98	15	15	M 6 - M 20	442003 4024	230,–
SK 50	19	38	62	60	9	9	M 3 - M 12	442003 5012	265,–
SK 50	31	55	83	84	15	15	M 6 - M 20	442003 5024	285,–

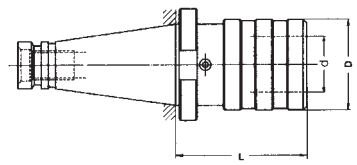
4117



DIN ISO 7388-2 / MAS BT JIS B 6339

Shank	d mm	D mm	A mm	Length compensation, pressure mm	Length compensation, tension mm	Thread	art.no.	€
SK 40	19	38	68	9	9	M 3 - M 12	**442007** 4012	185,–
SK 40	31	55	93	15	15	M 6 - M 20	442007 4024	240,–
SK 50	31	55	102	15	15	M 6 - M 20	442007 5024	355,–

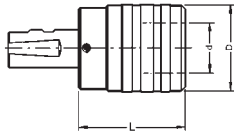
4117



DIN 2080

Shank	d mm	D mm	A mm	Length compensation, pressure mm	Length compensation, tension mm	Thread	art.no.	€
SK 40	19	38	53	9	9	M 3 - M 12	**442001** 4012	210,–
SK 40	31	55	77	15	15	M 6 - M 20	442001 4024	255,–
SK 50	31	55	79	15	15	M 6 - M 20	442001 5024	330,–

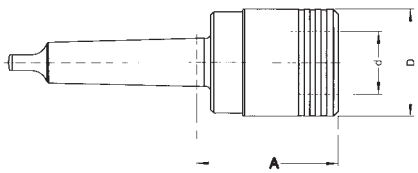
4117



Straight shank similar to DIN 1835 B+E

Shank Ø mm	d mm	D mm	A mm	Length compensation, pressure mm	Length compensation, tension mm	Thread	art.no.	€
25	19	38	41	9	9	M 3 - M 12	**442008** 2519	182,–
25	31	55	63	15	15	M 6 - M 20	442008 2531	225,–

4117



DIN 228

Shank	d mm	D mm	A mm	Length compensation, pressure mm	Length compensation, tension mm	Thread	art.no.	€
MT 2	19	38	46	9	9	M 3 - M 12	**442015** 0212	159,–
MT3	19	38	46	9	9	M 3 - M 12	442015 0312	156,–
MT3	31	55	69	15	15	M 6 - M 20	442015 0324	195,–
MT 4	31	55	70	15	15	M 6 - M 20	442015 0424	195,–

4117

SARA® Quick-release inserts

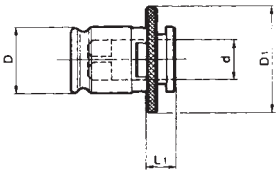
- Further sizes available on request

Without coupling

d mm	Quadratic mm	D mm	L mm	D1 mm	Thread	DIN	art.no.	€
2.8	2.1	19	7	30	M 2	371	**442501** 1928	21,70
3.5	2.7	19	7	30	M 3	371	442501 1935	21,70
4	3.0	19	7	30	M 3.5	371	442501 1940	21,70
4.5	3.4	19	7	30	M 4	371	442501 1945	21,70
6	4.9	19	7	30	M 5 / M 6	371	442501 1960	21,70
8	6.2	19	7	30	M 8	371	442501 1980	21,70
10	8	19	7	30	M 10	371	442501 1910	21,70
7	5.5	19	7	30	M 10	376	442501 1970	21,70
9	7	19	7	30	M 12	376	442501 1990	21,70
11	9	19	7	30	M 14	376	442501 1911	21,70
6	4.9	31	11	46	M 5 / M 6	371	442501 3106	28,40
8	6.2	31	11	46	M 8	371	442501 3108	28,40
10	8	31	11	46	M 10	371	442501 3110	28,40
7	5.5	31	11	46	M 10	376	442501 3107	28,40
9	7	31	11	46	M 12	376	442501 3109	28,40
11	9	31	11	46	M 14	376	442501 3111	28,40
12	9	31	11	46	M 16	376	442501 3112	28,40
14	11	31	11	46	M 18	376	442501 3114	28,40
16	12	31	11	46	M 20	376	442501 3116	28,40
18	14.5	31	11	46	M 22	376	442501 3118	28,40

4117

Without coupling

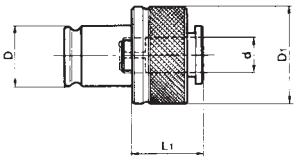


With safety coupling

d mm	Quadratic mm	D mm	L mm	D1 mm	Thread	DIN	With adjustable coupling art.no.	€
2.8	2.1	19	25	32	M 2	371	**442505** 1928	45,90
3.5	2.7	19	25	32	M 3	371	442505 1935	45,90
4	3.0	19	25	32	M 3.5	371	442505 1940	45,90
4.5	3.4	19	25	32	M 4	371	442505 1945	45,90
6	4.9	19	25	32	M 5 / M 6	371	442505 1960	45,90
8	6.2	19	25	32	M 8	371	442505 1980	45,90
10	8	19	25	32	M 10	371	442505 1910	45,90
7	5.5	19	25	32	M 10	376	442505 1970	45,90
9	7	19	25	32	M 12	376	442505 1990	45,90
11	9	19	25	32	M 14	376	442505 1911	45,90
6	4.9	31	34	50	M 5 / M 6	371	442505 3106	67,50
8	6.2	31	34	50	M 8	371	442505 3108	67,50
10	8	31	34	50	M 10	371	442505 3110	67,50
7	5.5	31	34	50	M 10	376	442505 3107	67,50
9	7	31	34	50	M 12	376	442505 3109	67,50
11	9	31	34	50	M 14	376	442505 3111	67,50
12	9	31	34	50	M 16	376	442505 3112	67,50
14	11	31	34	50	M 18	376	442505 3114	67,50
16	12	31	34	50	M 20	376	442505 3116	67,50
18	14.5	31	34	50	M 22	376	442505 3118	67,50

4117

With safety coupling



Tap clamping sleeve

- **Torsion-free design**
- Tap clamping sleeve for machines with a synchronous thread cutting mechanism
- **Use:** In conventional DIN 1835 B (Weldon) chucks,
  Thread cutting in hard-to-reach areas
- Synchronisation between speed and forward thrust, no slip between the sleeve and drill bit
- 100 % cooling at the cutting edge with internal coolant supply

D mm	d mm	Quadratic mm	L mm	art.no.	€
16	3.5	2.7	56	**442016** 1635	33,80
16	4	3	56	442016 1640	33,80
16	4.5	3.4	56	442016 1645	33,80
16	6	4.9	56	442016 1660	33,80
20	4.5	3.4	58	442016 2045	33,80
20	6	4.9	58	442016 2060	33,80
20	7	5.5	58	442016 2070	33,80
20	8	6.2	58	442016 2080	33,80
20	9	7	58	442016 2090	33,80
20	10	8	58	442016 2010	33,80

4117

D mm	d mm	Quadratic mm	L mm	art.no.	€
25	4.5	3.4	66	442016 2545	46,40
25	6	4.9	66	442016 2560	46,40
25	7	5.5	66	442016 2570	46,40
25	8	6.2	66	442016 2580	46,40
25	9	7	66	442016 2590	46,40
25	10	8	66	442016 2510	46,40
25	11	9	66	442016 2511	46,40
25	12	9	66	442016 2512	46,40
32	6	4.9	70	442016 3260	50,50
32	7	5.5	70	442016 3270	50,50

4117

D mm	d mm	Quadratic mm	L mm	art.no.	€
32	8	6.2	70	442016 3280	50,50
32	9	7	70	442016 3290	50,50
32	10	8	70	442016 3210	50,50
32	11	9	70	442016 3211	50,50
32	12	9	70	442016 3212	50,50
32	14	11	70	442016 3214	50,50
32	16	12	70	442016 3216	50,50
32	18	14.5	70	442016 3218	50,50

4117

SARA® MT clamping sleeve for taps

- For taps with straight shank and square driving pin **according to DIN 6328**
- Ground bore and external taper
- Fully hardened and ground

Morse taper	Interior Ø mm	Length mm	art.no.	€
1	2.5	65.5	**442017** 1025	21,20
1	3.5	65.5	442017 1035	21,20
1	4.0	65.5	442017 1040	21,20
1	4.5	65.5	442017 1045	21,20
1	5	65.5	442017 1050	21,20
1	5.5	65.5	442017 1055	21,20
1	6	65.5	442017 1060	21,20
1	7	65.5	442017 1070	21,20
1	8	65.5	442017 1080	21,20
2	10	78.5	442017 2100	25,10
2	11	78.5	442017 2110	25,10
2	12	78.5	442017 2120	25,10
2	4.5	78.5	442017 2045	25,10
2	6	78.5	442017 2060	25,10
2	7	78.5	442017 2070	25,10
2	8	78.5	442017 2080	25,10
2	9	78.5	442017 2090	25,10
3	10	98	442017 3100	33,70
3	11	98	442017 3110	33,70
3	12	98	442017 3120	33,70
3	14	98	442017 3140	33,70
3	16	98	442017 3160	33,70
3	8	98	442017 3080	33,70
3	9	98	442017 3090	33,70
4	12	123	442017 4120	57,40
4	14	123	442017 4140	57,40
4	16	123	442017 4160	57,40
4	18	123	442017 4180	57,40
4	22	123	442017 4220	57,40
4	25	123	442017 4250	57,40
5	25	156	442017 5250	98,–
5	28	156	442017 5280	98,–
5	30	156	442017 5300	98,–
5	32	156	442017 5320	98,–
5	36	156	442017 5360	98,–

4107

ER synchro insert STA

The **STA** (**S**ynchro **T**apping **A**daptor) synchro insert was specially developed for ER collet holding fixtu es and allows tapping and forming on machines with synchronised spindles.

- For ER collet holding fixtu es and powered tools
- Compensation for synchronisation errors
- Minimal length compensation under compression and tension
- Minimal strain on the thread flan s
- Compact design
- Internal coolant supply suitable up to 50 bar
- Suitable for left-hand and right-hand thread
- **Only used standard clamping nuts in accordance with SO15488 (DIN6499)**
- **Not for sealed nuts or mini nuts**

Synchro tool fixtu e STL

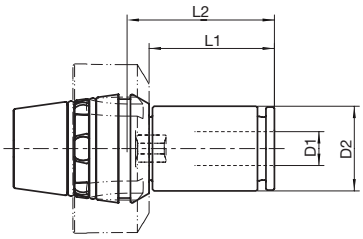
- Base support for STH synchro tool head

Type	Designation	art.no.	€
2	ER16	**442100** 0016	49,–
3	ER20	442100 0020	49,–
4	ER25	442100 0025	49,–
5	ER32	442100 0032	49,–

4195

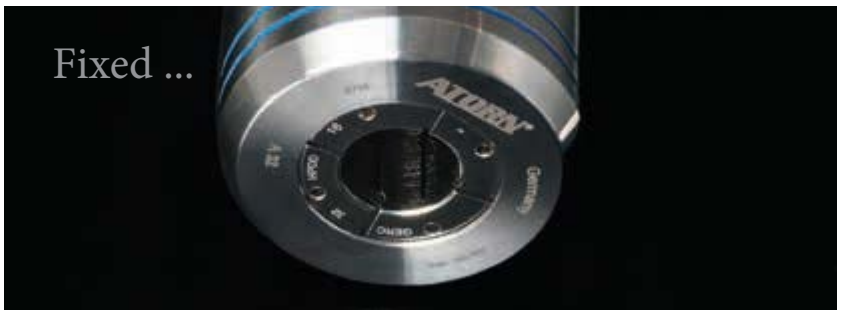
Synchro tool head STH

- Use for STL synchro tool fixtu e
- Length compensation: +0.5 mm / -0.2 mm



for type	D1 mm	Quadratic mm	for tap M	D2 mm	L1 mm	L2 mm	art.no.	€
2	3.5	2.7	M3; M5	12.7	24	26.3	**442110** 1601	49,–
2	4.5	3.4	M4; M6	12.7	24	26.3	442110 1602	49,–
2	5	4	M4; M5	12.7	24	27.3	442110 1603	49,–
3	6	4.9	M5; M6; M8	15.8	35	31	442110 2001	49,–
3	7	5.5	M7; M9; M10	15.8	35	31	442110 2002	49,–
4	6	4.9	M5; M6; M8	19	27	31	442110 2501	49,–
4	7	5.5	M7; M9; M10	19	30	33.5	442110 2502	49,–
4	8	6.2	M8; M11	19	30	34.5	442110 2503	49,–
4	9	7	M9; M12	19	40	33.5	442110 2504	49,–
5	7	5.5	M7; M9; M10	25	19	33.5	442110 3202	49,–
5	8	6.2	M8; M11	25	37	41	442110 3203	49,–
5	9	7	M9; M12	25	37	42	442110 3204	49,–
5	10	8	M10	25	37	43	442110 3205	49,–
5	6	4.9	M5; M6; M8	25	8	31	442110 3201	49,–
5	11	9	M14	25	37	44	442110 3206	49,–
5	12	9	M12; M16	25	37	44	442110 3207	49,–

4195



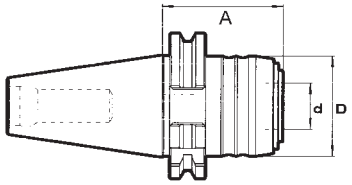
... and stable.

ATORN®
Performance demands quality

ATORN® Thread cutting quick-change chuck for synchronous spindles

- **Minimal length compensation** thanks to damping element
- Secure clamping in quick-release inserts for ER collets
- Clamping screws to prevent the clamped tap from twisting
- For use on drilling machines and machining centres with synchronous spindles

Also available for machines with minimum-volume lubrication



DIN 69893 type A (HSK-A)

- Internal coolant supply
- When machining with internal coolant supply, a coolant transfer pipe with art.no. 431011... should be used
- Supplied without quick-release insert

Shank	for collets	d mm	D mm	A mm	Length compensation, pressure mm	Length compensation, tension mm	for thread	art.no.	€
HSK-A 63	ER16	20	43	64	0.2	1	M3 - M12	**442021** 6316	220,–
HSK-A 63	ER25	32	60	97	0.2	1	M6 - M20	442021 6325	280,–

4117

DIN ISO 7388-1 / DIN 69871 AD

- Internal coolant supply
- Supplied without quick-release insert

Shank	for collets	d mm	D mm	A mm	Length compensation, pressure mm	Length compensation, tension mm	for thread	art.no.	€
SK 40	ER16	20	43	53	0.2	1	M3 - M12	**442020** 4016	172,–
SK 40	ER25	32	60	90	0.2	1	M6 - M20	442020 4025	235,–
SK 50	ER16	20	43	53	0.2	1	M3 - M12	442020 5016	191,–
SK 50	ER25	32	60	74	0.2	1	M6 - M20	442020 5025	300,–

4117

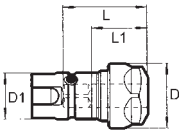
Str. shank sim. to DIN 1835 B+E

- Supplied without quick-release insert

Shank	for collets	d mm	D mm	A mm	Length compensation, pressure mm	Length compensation, tension mm	for thread	art.no.	€
Ø 25	ER16	20	43	34	0.2	1	M3 - M12	**442022** 2516	152,–
Ø 25	ER25	32	60	56	0.2	1	M6 - M20	442022 2525	172,–

4117

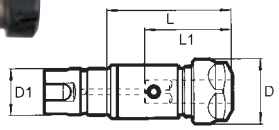
Quick-release inserts, one-piece



for collets	L mm	L1 mm	D mm	D1 mm	for thread	art.no.	€
ER16	37	24	28	20	M3 - M12	**442025** 2016	97,50
ER25	52	28	42	32	M6 - M20	442025 3225	118,–

4117

Quick-release inserts, two-piece



for collets	L mm	L1 mm	D mm	D1 mm	for thread	art.no.	€
ER16	55	38	28	20	M3 - M12	**442026** 2016	255,–
ER25	86	63	42	32	M6 - M20	442026 3225	275,–

4117

Extension for two-piece quick-release inserts

Illustration shows an extended quick-release insert with two extensions

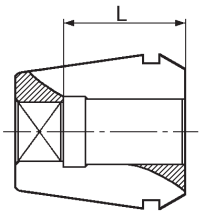
L mm	D mm	for thread	art.no.	€
25	23	M3 - M12	**442027** 2325	33,10
50	23	M3 - M12	442027 2350	38,80
50	35	M6 - M20	442027 3410	59,–
100	35	M6 - M20	442027 3450	50,50

4117

Threading tap collet chucks, type A

DIN 6499-A

- **With square socket**
- For clamping thread cutting tools

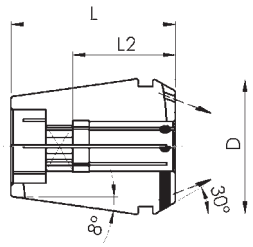


Shank Ø mm	Quadratic mm	L mm	ER16 4031E art.no.	€	ER20 4276E art.no.	€	ER25 4282E art.no.	€	ER32 4537E art.no.	€	ER40 4716E art.no.	€
3.5	2.7	18	**433050** 0035	33,70	**433053** 0035	35,70	**433055** 0035	36,80				
4.5	3.4	18	433050 0045	33,70	433053 0045	35,70	433055 0045	36,80	**433057** 0045	40,50		
5.5	4.3	18					433055 0055	36,80	433057 0055	40,50		
6	4.9	18	433050 0060	33,70	433053 0060	35,70	433055 0060	36,80	433057 0060	40,50	**433059** 0060	46,90
7	5.5	18	433050 0070	33,70	433053 0070	35,70	433055 0070	36,80	433057 0070	40,50	433059 0070	46,90
8	6.2	22	433050 0080	33,70	433053 0080	35,70	433055 0080	36,80	433057 0080	40,50	433059 0080	46,90
9	7	22			433053 0090	35,70	433055 0090	36,80	433057 0090	40,50	433059 0090	46,90
10	8	25			433053 0100	35,70	433055 0100	36,80	433057 0100	40,50	433059 0100	46,90
11	9	25			433053 0110	35,70	433055 0110	36,80	433057 0110	40,50	433059 0110	46,90
12	9	25			433053 0120	35,70	433055 0120	36,80	433057 0120	40,50	433059 0120	46,90
14	11	25					433055 0140	36,80	433057 0140	40,50	433059 0140	46,90
16	12	25					433055 0160	36,80	433057 0160	40,50	433059 0160	46,90
18	14.5	33									433059 0180	46,90
20	16	33									433059 0200	46,90
			4120		4120		4120		4120		4120	

FAHRION® PRAZISION Thread cutting collets sealed with spray nozzles

- **With square socket**
- For clamping thread cutting tools
- With seals for internal coolant supply and spray nozzles

Fahrion Protect - corrosion protection for functional surfaces in the μ area



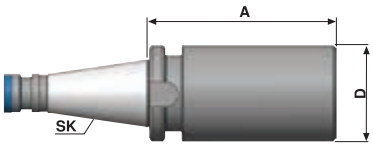
Shank Ø mm	Quadratic mm	L2 mm	GERC20-GBDD / 4276E D = 20,7 L = 31,5 art.no.	€	GERC25-GBDD / 4282E D = 25,7 L = 34 art.no.	€	GERC32-GBDD / 4537E D = 32,7 L = 40 art.no.	€
4.5	3.55	18	**433161** 0450	73,–	**433162** 0450	76,–	**433163** 0450	82,–
6	5	18	433161 0600	73,–	433162 0600	76,–	433163 0600	82,–
7	5.6	18	433161 0700	73,–	433162 0700	76,–	433163 0700	82,–
8	6.3	22	433161 0800	73,–	433162 0800	76,–	433163 0800	82,–
9	7.1	22	433161 0900	73,–	433162 0900	76,–	433163 0900	82,–
10	8	25	433161 1000	73,–	433162 1000	76,–	433163 1000	82,–
11	9	25			433162 1100	76,–	433163 1100	82,–
12	9	25			433162 1200	76,–	433163 1200	82,–
14	11.2	25			433162 1400	76,–	433163 1400	82,–
16	12.5	25					433163 1600	82,–
18	14.5	30					433163 1800	82,–
			4118		4118		4118	

Machine tap

page 208

SARA® Boring bar blanks

- Steep-angle taper and collar case-hardened to HRc 60 ± 2 (HV 700 ± 50) and ground
- Soft shank for further machining



DIN ISO 7388-1 / DIN 69871 A

Shank	A mm	D mm	art.no.	€
SK 40	250	63	**431002** 4063	87,50
SK 50	315	97	431002 5097	145,–
			4117	

DIN 2080

Shank	A mm	D mm	art.no.	€
SK 40	250	63	**431000** 4063	96,–
SK 50	315	97	431000 5097	158,–
			4117	

Tool pre-setting devices

- quantifiably easier
- quantifiably more accurate
- quantifiably more eÿciemt

page 1536

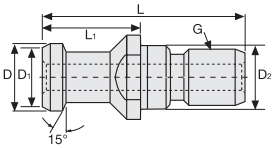
Test mandrels

- For testing the true running accuracy of machine spindles
- Precision-ground diameter and flat surface

page 1352

ATORN® Pull studs

- For tools with a steep-angle taper in accordance with DIN 69871 and JIS B 6339 (MAS-BT)
- All pull studs made from 16MnCr5, case hardened to HRc 58 ± 2
- Soft thread and bore, burnished and ground
- **Pull studs with O-ring = sealed**
- Other versions available on request (machine model must be specified)



DIN ISO 7388-3 AD, with bore

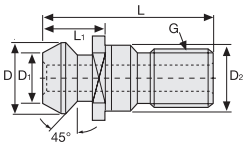
suitable for	D mm	D1 mm	D2 mm	Thread	L mm	L1 mm	Bore hole Ø mm	O-ring	art.no.	€
SK30	13	9	13	M12	44	24	4	Yes	**438501** 0030	9,65
SK40	19	14	17	M16	54	26	7	Yes	438501 0040	9,25
SK50	28	21	25	M24	74	34	11.5	Yes	438501 0050	11,50

4133

DIN ISO 7388-3 AF, without bore

suitable for	D mm	D1 mm	D2 mm	Thread	L mm	L1 mm	Bore hole Ø mm	O-ring	art.no.	€
SK30	13	9	13	M12	44	24	-	Yes	**438502** 0030	9,90
SK40	19	14	17	M16	54	26	-	Yes	438502 0040	9,65
SK50	28	21	25	M24	74	34	-	Yes	438502 0050	11,95

4133



DIN ISO 7388-3 UD, with bore

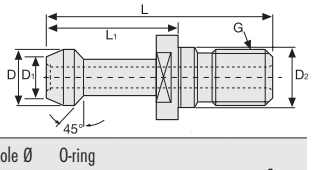
suitable for	D mm	D1 mm	D2 mm	Thread	L mm	L1 mm	Bore hole Ø mm	O-ring	art.no.	€
SK40	18.95	12.95	17	M16	44.5	16.25	7	Yes	**438505** 0040	10,40
SK50	29.1	19.6	25	M24	65.5	25.55	11.5	Yes	438505 0050	13,50

4133

DIN ISO 7388-3 UF, without bore

suitable for	D mm	D1 mm	D2 mm	Thread	L mm	L1 mm	Bore hole Ø mm	O-ring	art.no.	€
SK40	18.95	12.95	17	M16	44.5	16.25	-	Yes	**438506** 0040	9,45
SK50	29.1	19.6	25	M24	65.5	25.55	-	Yes	438506 0050	12,55

4133



DIN ISO 7388-3 JD 45°, with bore

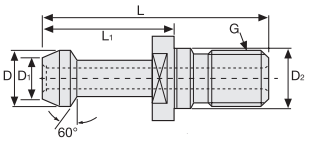
suitable for	D mm	D1 mm	D2 mm	Thread	L mm	L1 mm	Bore hole Ø mm	O-ring	art.no.	€
SK30	11	7	12.5	M12	43	23	2.7	Yes	**438509** 4530	11,75
SK40	15	10	17	M16	60	35	4	Yes	438509 4540	10,20
SK50	23	17	25	M24	85	45	6	Yes	438509 4550	15,10

4133

DIN ISO 7388-3 JF 45°, without bore

suitable for	D mm	D1 mm	D2 mm	Thread	L mm	L1 mm	Bore hole Ø mm	O-ring	art.no.	€
SK30	11	7	12.5	M12	43	23	-	No	**438510** 4530	10,20
SK40	15	10	17	M16	60	35	-	Yes	438510 4540	9,65
SK50	23	17	25	M24	85	45	-	Yes	438510 4550	15,20

4133



DIN ISO 7388-3 JD 60°, with bore

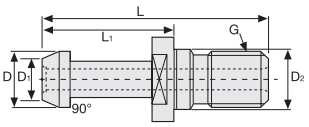
suitable for	D mm	D1 mm	D2 mm	Thread	L mm	L1 mm	Bore hole Ø mm	O-ring	art.no.	€
SK30	11	7	12.5	M12	43	23	2.7	No	**438508** 6030	10,30
SK40	15	10	17	M16	60	35	4	Yes	438508 6040	9,65
SK50	23	17	25	M24	85	45	6	Yes	438508 6050	14,80

4133

DIN ISO 7388-3 JF 60°, without bore

suitable for	D mm	D1 mm	D2 mm	Thread	L mm	L1 mm	Bore hole Ø mm	O-ring	art.no.	€
SK30	11	7	12.5	M12	43	23	-	No	**438510** 6030	9,55
SK40	15	10	17	M16	60	35	-	Yes	438510 6040	9,45
SK50	23	17	25	M24	85	45	-	Yes	438510 6050	14,70

4133



DIN ISO 7388-3 JD 90°, with bore

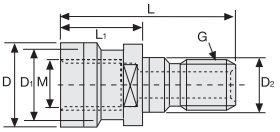
suitable for	D mm	D1 mm	D2 mm	Thread	L mm	L1 mm	Bore hole Ø mm	O-ring	art.no.	€
SK40	15	10	17	M16	60	35	4	Yes	**438511** 9040	9,45
SK50	23	17	25	M24	95	45	6	Yes	438511 9050	14,80

4133

DIN ISO 7388-3 JF 90°, without bore

suitable for	D mm	D1 mm	D2 mm	Thread	L mm	L1 mm	Bore hole Ø mm	O-ring	art.no.	€
SK40	15	10	17	M16	60	35	4	Yes	**438512** 9040	9,45
SK50	23	17	25	M24	95	45	6	Yes	438512 9050	14,70

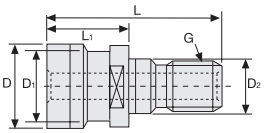
4133



Ott ring groove, 15° with tapped head, for DIN 69871 AD shank

suitable for	D mm	D1 mm	D2 mm	Thread	L mm	L1 mm	Bore hole Ø mm	O-ring	art.no.	€
SK40	25	21.1	17	M16	53	25.1	M16 / 7.5	Yes	**438515** 0040	11,50
SK50	39.6	32	25	M24	65.1	25.1	M24 / 11.5	Yes	438515 0050	15,80

4133



Ott ring groove, 15° with bore, for DIN 69871 AD shank

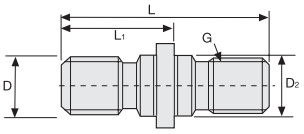
suitable for	D mm	D1 mm	D2 mm	Thread	L mm	L1 mm	Bore hole Ø mm	O-ring	art.no.	€
SK40	25	21.1	17	M16	53	25.1	7.5	Yes	**438516** 0040	10,70
SK50	39.6	32	25	M24	65.1	25.1	11.5	Yes	438516 0050	14,70

4133

Ott ring groove, 15° without bore, for DIN 69871 AD shank

suitable for	D mm	D1 mm	D2 mm	Thread	L mm	L1 mm	Bore hole Ø mm	O-ring	art.no.	€
SK40	25	21.1	17	M16	53	25.1	-	No	**438517** 0040	10,70
SK50	39.6	32	25	M24	65.1	25.1	-	No	438517 0050	14,30

4133



Saw-tooth thread stud SK40 S20X2 for cover

suitable for	D mm	D1 mm	D2 mm	Thread	L mm	L1 mm	Bore hole Ø mm	O-ring	art.no.	€
SK40	S20 x 2	-	17	S20x2	56.2	28	-	No	**438520** 0041	18,10

4133

Clamping screws for milling cutter holding fixtu es, DIN 6359

Weldon clamping screws, DIN 1835 B

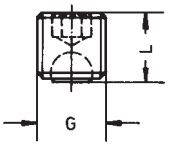
- For clamping DIN 1835 B straight shanks in DIN 6359/1835 Part 2 - 3 milling cutter arbours (Weldon jaw chuck)
- For standard and long chuck designs
- Clamping screws for short chuck versions (Ø 16 / 20 / 25 A = 35 mm, Ø 32 A = 65 mm) available on request

Thread	L mm	for Ø mm	art.no.	€
M10	12	10	**431012** 0010	3,–
M12	16	12	431012 0012	5,–
M14	16	16	431012 0014	5,–
M16	16	20	431012 0016	5,–
M18x2	20	25	431012 0025	12,–
M20x2	20	32+40	431012 0032	12,–
M6	10	6	431012 0006	3,–
M8	10	8	431012 0008	3,–

4117

Whistle-notch clamping screws, DIN 1835 E

- Ball version
- For clamping DIN 1835 E straight shanks (with suitable clamping surface) in DIN 6359/1835 Part 2 - 3 milling cutter arbours (Weldon jaw chuck)

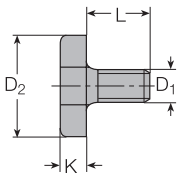


Thread	L mm	for Ø mm	art.no.	€
M 6	10	6	**431013** 0006	8,40
M 8	10	8	431013 0008	9,35
M10	12	10	431013 0010	10,30
M12	16	12 + 14	431013 0012	12,15
M14	16	16 + 18	431013 0014	14,50
M16	16	20	431013 0016	14,95
M18x2	20	25	431013 0018	18,70
M20x2	20	32 + 40	431013 0020	20,60

4117

Cutter retaining screw for shell-type milling cutter arbours

DIN 6367

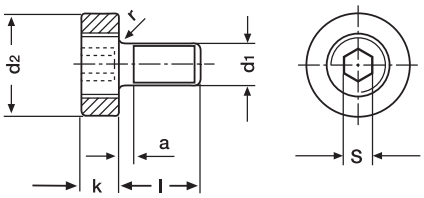


D1 mm	for gauge Ø mm	D2 mm	K mm	L mm	Standard art.no.	Standard €	For internal cooling art.no.	For internal cooling €
M8	16	20	6	16	**438001** 0008	6,10	**438002** 0008	11,85
M10	22	28	7	18	438001 0010	7,50	438002 0010	11,85
M12	27	35	8	22	438001 0012	8,75	438002 0012	13,15
M16	32	42	9	26	438001 0016	12,80	438002 0016	22,40
M20	40	52	10	30	438001 0020	17,10		
M24	50	63	12	36	438001 0024	27,60		

4117 4117

Cutter retaining screw for milling cutter arbours

- **For milling cutter arbours, holding fixtu es for cutter heads and milling cutters with transverse slots**
- The diffe ent pitches of the two threads on the threaded bolt create a strong locking effect. The milling cutter is secu ely clamped without a major exertion of force, tube extensions or hammer blows.



for gauge Ø mm	D mm	L mm	L1 mm	L2 mm	R mm	S mm	Thread	art.no.	€
16	20	16	3	7	1.6	5	M 8	**438010** 0008	8,10
22	28	18	3.6	8	2	6	M10	438010 0010	11,70
27	35	22	4.5	9	2.5	8	M12	438010 0012	14,10
32	42	26	5.5	10	3	10	M16	438010 0016	19,50
40	52	30	6	11	3	12	M20	438010 0020	30,–
50	63	36	7.5	13	4	14	M24	438010 0024	42,–

4117

Carrier blocks

- **For shell-type milling cutter arbours with transverse slots**
- With screw

for gauge Ø mm	B mm	H mm	L mm	art.no.	€
16	8	10	10	**438026** 0016	9,85
22	10	11	11	438026 0022	9,85
27	12	13	14	438026 0027	15,50
32	14	14	22	438026 0032	15,50
40	16	16	23	438026 0040	19,70
				4117	

Fitting keys

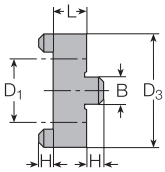
- For combination shell-type milling cutter arbours

for gauge Ø mm	B mm	H mm	L mm	art.no.	€
16	4	4	20	**438025** 0016	5,65
22	6	6	25	438025 0022	5,65
27	7	7	25	438025 0027	5,65
32	8	7	28	438025 0032	5,65
40	10	8	32	438025 0040	5,65
				4117	

Follower rings

DIN 6366

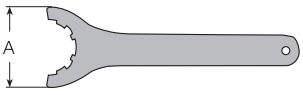
- **For shell-type milling cutter arbours**



D1 mm	L mm	D3 mm	B mm	H mm	art.no.	€
16	10	32	8	5	**438020** 0016	12,65
22	12	40	10	5.6	438020 0022	15,50
27	12	48	12	6.3	438020 0027	15,50
32	14	58	14	7	438020 0032	19,70
40	14	70	16	8	438020 0040	29,40
					4117	

Chuck key

- **For DIN 6499 type ER clamping nuts, DIN 1804 slotted nuts and DIN 981 roller bearing nuts**
- Special steel



Standard

for clamping nut	A mm	art.no.	€
ER 16	50	**438030** 0016	11,90
ER 20	60	438030 0028	12,85
ER 25	65	438030 0042	13,65
ER 32	75	438030 0050	19,20
ER 40	90	438030 0063	25,40
		4120	

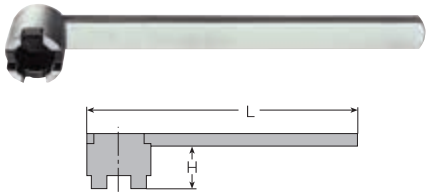
Mini

for clamping nut	A mm	art.no.	€
ER 11 MINI	22.3	**438031** 0011	15,40
ER 16 MINI	22.5	438031 0016	16,20
ER 20 MINI	29	438031 0020	17,70
		4120	

Key for shell-type milling cutter arbours

DIN 6368

- **For tightening DIN 6367 retaining screws**
- Special steel hardened and tempered to a burnished shade



for gauge Ø mm	Thread	H mm	L mm	art.no.	€
16	M8	20	180	**438005** 0016	14,60
22	M10	25	200	438005 0022	17,95
27	M12	32	225	438005 0027	20,80
32	M16	36	250	438005 0032	27,70
40	M20	40	280	438005 0040	36,40
50	M24	45	315	438005 0050	69,60

4159

Hook spanner

DIN 1810A DIN 1810B

- Special steel, hardened and burnished
- * not DIN-compliant

With milled nose, for DIN 1804 slotted nuts

- DIN 1810A

Wr. width mm	Total length mm	Thickness mm	art.no.	€
16 - 20	110	3	**701550** 0020	4,92
25 - 28	136	4	701550 0028	5,18
30 - 32	136	4	701550 0032	5,20
34 - 36	170	5	701550 0036	6,18
40 - 42	170	5	701550 0042	6,12
45 - 50	206	6	701550 0050	7,12
52 - 55	206	6	701550 0055	7,28
58 - 62	240	7	701550 0062	10,75
68 - 75	240	7	701550 0075	10,65
80 - 90	280	8	701550 0090	14,40
95 - 100	280	8	701550 0100	14,50
110 - 115	335	10	701550 0115	25,30
120 - 130	335	10	701550 0130	25,30
135 - 145	385	10*	701550 0145	31,25
155 - 165	385	10*	701550 0165	31,25
180 - 195	470	10*	701550 0195	51,20

4159

With pilot tip, for capstan nuts, DIN 1816

- DIN 1810B

Wr. width mm	Pin Ø mm	Pin length mm	Total length mm	Thickness mm	art.no.	€
16 - 18	2.5	2.5	110	3	**701560** 0020	5,54
25 - 28	3.0	3.0	136	4	701560 0028	6,26
30 - 32	4.0	3.0	136	4	701560 0032	6,26
34 - 36	4.0	3.5	170	5	701560 0036	7,36
40 - 42	4.0	3.5	170	5	701560 0042	7,42
45 - 50	5.0	4.0	206	6	701560 0050	9,18
52 - 55	5.0	4.0	206	6	701560 0055	9,24
58 - 62	5.0	5.0	240	7	701560 0062	12,20
68 - 75	6.0	5.0	240	7	701560 0075	12,35
80 - 90	6.0	6.0	280	8	701560 0090	15,25
95 - 100	8.0	6.0	280	8	701560 0100	15,25
110 - 115	8.0	8.0	335	8*	701560 0115	26,35
120 - 130	8.0	8.0	335	8*	701560 0130	26,35
135 - 145	8.0	8.0	380	8*	701560 0145	34,30
180 - 195	10.0	8.0	470	10*	701560 0195	57,90

4159

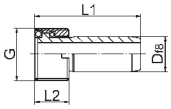
Coolant transfer pipe key

Shank	L mm	D mm	art.no.	€
HSK 32	115	8.5	**431018** 0032	24,20
HSK 40	115	10.5	431018 0040	24,20
HSK 50	115	14.5	431018 0050	24,20
HSK 63	136	16.5	431018 0063	21,50
HSK 80	136	18.5	431018 0080	27,30
HSK 100	136	22	431018 0100	28,30

4117

Coolant transfer pipe

- For optimising the central coolant supply
- For DIN 69893-HSK-A hollow shank tapers, with two mounted sealing rings

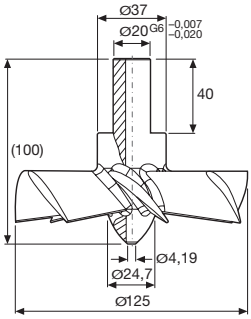


Shank	L1 mm	L2 mm	D mm	Thread	art.no.	€
HSK 32	26	5.5	6	M10 x 1	**431011** 0032	10,80
HSK 40	29.5	7.5	8	M12 x 1	431011 0040	10,80
HSK 50	33	9.5	10	M16 x 1	431011 0050	10,80
HSK 63	34.5	11.5	12	M18 x 1	431011 0063	10,80
HSK 80	40	13	14	M20 x 1.5	431011 0080	10,80
HSK 100	44	15.5	16	M24 x 1.5	431011 0100	10,80

4117

ATORN® Chip booster

- Made from high-strength anodised aluminium
- Automatic cleaning of machine tool working area
- Reduced auxiliary processing times
- Low compressed air consumption
- Central coolant supply
- Balanced to G 2.5 / 12,000 rpm



Ø mm	Shank Ø mm	art.no.	€
125	20	**400561** 0125	295,–

4144

Taper wiper

- SK and MT wipers with robust wooden body and felt strips
- HSK wipers with robust plastic body and felt strips
- For cleaning the internal taper on machines and sleeves
- Felt strips resistant to oil and emulsions
- High absorption capacity
- Long service life

Hollow taper wiper

for taper support	Total length mm	art.no.	€
HSK 100	199	**400560** 1100	71,50
HSK 32	138	400560 1032	49,70
HSK 40	142	400560 1040	51,50
HSK 50	152	400560 1050	53,50
HSK 63	168	400560 1063	56,50

4109

Steep-angle taper wiper

for taper support	Total length mm	art.no.	€
SK 30	168	**400560** 0030	12,75
SK 40	188	400560 0040	15,70
SK 50	240	400560 0050	27,60

4109

Morse taper wiper

for taper support	Total length mm	art.no.	€
MT 1	157	**400560** 0001	8,35
MT 2	192	400560 0002	10,55
MT3	196	400560 0003	13,15
MT 4	222	400560 0004	16,30
MT 5	258	400560 0005	23,–

4109

Data holders

- Clear marking of tool holders
- Tidy-looking tool storage
- Made of plastic
- Minimised tooling time
- Tool optimisation through diffe ent colours

Systematic labelling

for SK40 / HSK63

Colour	art.no.	€
Blue	**438061** 0002	3,70
Brown	438061 0005	3,70
Yellow	438061 0004	3,70
Grey	438061 0006	3,70
Green	438061 0003	3,70
Red	438061 0001	3,70

4121

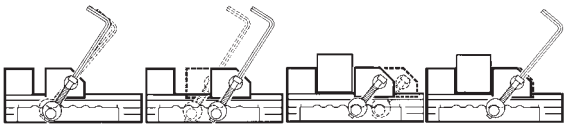
for SK50 / HSK100

Colour	art.no.	€
Blue	**438062** 0002	4,50
Brown	438062 0005	4,50
Yellow	438062 0004	4,50
Grey	438062 0006	4,50
Green	438062 0003	4,50
Red	438062 0001	4,50

4121

ROHM Precision clamp with quick adjustment

- **Quick adjustment**
- Maximum accuracy
- Made from alloyed tool steel, hardened and fine y ground on all sides
- Easy to clamp and release with a hex key
- Clamping jaw can be adjusted in steps; engages automatically
- Pull-down effec
- Suitable for grinding, milling and engraving machines, jig boring machines, measuring and inspection work, and any production processes that demand the highest clamping accuracy



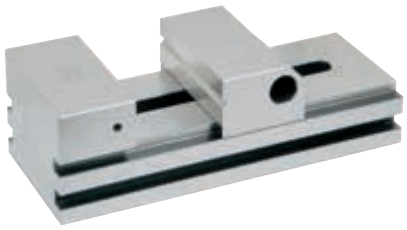
Horizontal V-block

Jaw width mm	Clamp Ø mm	Jaw height mm	Total height mm	Total length mm	Perpendicularity mm	Parallelism µm	art.no.	€
34	25	15	35	75	0.005	0.002	**463004** 0030	128,–
45	50	20	45	110	0.005	0.002	463004 0045	166,–

4190

Horizontal and vertical V-block

- (Size 0120 only horizontal V-block)



Jaw width mm	Clamp Ø mm	Jaw height mm	Total height mm	Total length mm	Perpendicularity mm	Parallelism µm	art.no.	€
70	80	30	62	160	0.005	0.002	**463006** 0070	260,–
90	120	40	80	210	0.005	0.002	463006 0090	332,–
120	150	40	90	280	0.005	0.002	463006 0120	443,–

4190

ROHM Precision clamp

- Maximum accuracy
- Made from alloyed tool steel, hardened and fine y ground on all sides
- Clamping and loosening via threaded spindle
- Horizontal V-block
- Suitable for grinding, milling and engraving machines, jig boring machines, measuring and inspection work, and any production processes that demand the highest clamping accuracy

Jaw width mm	Clamp Ø mm	Jaw height mm	Total height mm	Total length mm	Perpendicularity mm	Parallelism µm	art.no.	€
60	55	25	50	110	0.005	0.002	**463021** 0060	221,–
73	100	30	67	210	0.005	0.002	463021 0070	277,–
88	125	40	80	250	0.005	0.002	463021 0090	332,–

4190

SARA Precision vices

- Pull-down fixtu e
- One-piece vice bed and fi ed jaw
- Angularity and parallelism 0.005 mm / 100 mm, can be used on all sides
- Alloyed case-hardened tool steel, hardened and fine y ground, hardness HRc 58 - 62

Jaw width mm	Length mm	Jaw opening mm	Jaw height mm	art.no.	€
50	140	65	25	**463007** 1050	121,–
63	175	85	32	463007 0063	155,–
73	190	100	35	463007 0073	175,–
88	235	125	40	463007 0088	225,–
100	285	125	45	463007 0100	235,–

4152

SARA® Precision grinding and inspection vices

- **With spindle**
- Entirely made from steel, precision-ground on all sides, can be used on all four sides, hardness HRc 58 - 62
- Can be used on grinding machines, jig boring machines and other precision machinery
- Also for measuring and inspection work
- Tolerance 0.005 mm

Jaw width mm	Length mm	Jaw opening mm	Jaw height mm	art.no.	€
50	155	65	25	**463024** 0050	175,–
63	190	85	32	463024 0063	210,–
73	210	100	35	463024 0073	235,–
88	250	125	40	463024 0088	285,–
100	260	125	45	463024 0100	430,–

4152

SARA® Precision sinus vice

- Machining and checking of surfaces and angular surfaces
- Angle adjustment in 2 axes via Vernier scale and precision set screw
- Can be rotated horizontally by 360°
- Can be swivelled vertically by 2 x 60°
- Scale reading from Vernier 3'
- Tool steel, through-hardened, fully precision-ground
- Perpendicularity: 0,005/100 mm
- Parallelism: 0,005/100 mm

Jaw width mm	Clamp Ø mm	Jaw height mm	Length mm	Total height mm	Weight kg	art.no.	€
70	80	30	160	137	12	**459026** 0070	1.489,–

4152

ATORN® Parallel vice, steel

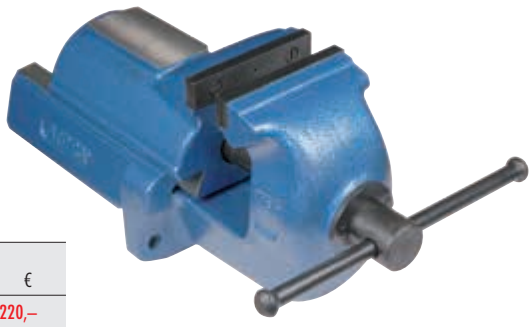
- Forged steel
- Opens to the front
- Concealed spindle
- Anvil and work top ground
- Jaws hardened and milled
- Sliding parts hardened and ground
- Hammer-finish paint, blu

Jaw width mm	Clamping range mm	Clamping depth mm	Weight kg	art.no.	€
100	140	75	7	**450115** 0100	112,–
125	150	80	11	450115 0125	138,–
150	200	120	17	450115 0150	198,–

4142

ATORN® Parallel vice, cast iron

- High-quality grey cast iron
- Opens to the rear
- Trapezoidal thread spindle protected against dirt
- Anvil with ground finis
- Reversible steel jaws, 1 side grooved, 1 side smooth
- Hammer-finish paint, blue (vailable in green on request)

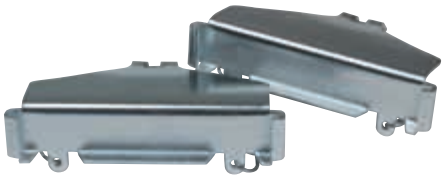


Jaw width mm	Clamping range mm	Clamping depth mm	Weight kg	art.no.	€
100	140	75	13	**450125** 0100	220,–
125	175	80	24	450125 0125	250,–
150	250	90	41	450125 0150	455,–

4141

Protective vice jaws

- For parallel vices
- With replaceable inserts
- Made from a variety of materials



Protective jaw holder

- Price per pair

Jaw width mm	art.no.	€
100	**452010** 0100	23,50
125	452010 0125	27,10
135	452010 0135	28,90
150	452010 0150	30,70

4140

Polyamide inserts

- Price per pair

Jaw width mm	art.no.	€
100	**452011** 0100	10,10
125	452011 0125	12,65
135	452011 0135	13,75
150	452011 0150	15,50

4140

Aluminium inserts

- Price per pair

Jaw width mm	art.no.	€
100	**452012** 0100	15,20
125	452012 0125	16,30
135	452012 0135	17,40
150	452012 0150	19,20

4140

Fibre inserts

- Price per pair

Jaw width mm	art.no.	€
100	**452013** 0100	14,45
125	452013 0125	15,50
135	452013 0135	16,30
150	452013 0150	18,10

4140

Polyamide V-block inserts

- Price per pair

Jaw width mm	art.no.	€
100	**452015** 0100	38,–
125	452015 0125	47,–
135	452015 0135	50,50
150	452015 0150	58,–

4140

Magnetic vice jaws

- **Compatible with all vice models**
- With integrated permanent magnets
- Material: Aluminium
- Further jaw widths from 80-200 mm as well as felt types available on request

Aluminium protective jaw with rubber coating

- 1 pair

Jaw width mm	art.no.	€
100	**452102** 0100	24,10
125	452102 0125	27,20
150	452102 0150	30,40

4140

Aluminium protective jaw with fib e coating

- Price per pair

Jaw width mm	art.no.	€
100	**452100** 0100	24,10
125	452100 0125	27,20
150	452100 0150	30,40

4140

Aluminium protective jaw, smooth surface

- Price per pair

Jaw width mm	art.no.	€
100	**452103** 0100	17,70
125	452103 0125	21,30
150	452103 0150	24,80

4140

Aluminium protective jaw, horizontal and vertical V-block 12 mm

- Price per pair

Jaw width mm	art.no.	€
100	**452105** 0100	25,60
125	452105 0125	29,–
150	452105 0150	32,30

4140

ATORN® Drilling machine vice

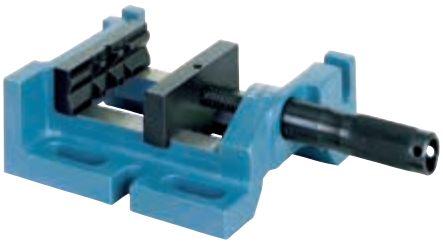
- Clamping jaws offs t for clamping flat orkpieces
- Horizontal and vertical V-blocks are integrated into the fi ed jaw for round material

Jaw width mm	Clamp Ø mm	art.no.	€
80	65	**451540** 0085	63,–
100	90	451540 0100	80,–
120	110	451540 0120	101,–
150	150	451540 0150	160,–

4150

RÖHM Drilling machine vice with three clamping options

- **Version with two additional, rectangular supporting surfaces**
- Three clamping options (base, right-hand and face)
- Clamping jaws offs t for clamping flat orkpieces
- Horizontal and vertical V-blocks are integrated into the fi ed jaw for round material



Jaw width mm	Clamp Ø mm	art.no.	€
100	93	**451545** 0100	74,60

4190

ATORN® Drilling machine vice with quick jaw adjustment

- Narrow version
- For quick and secure clamping, particularly when machining workpieces for mass production
- With guideway, **base clamping and lateral clamping devices,** also suitable for light milling work
- **One-handed operation** – quick jaw adjustment and clamping with just one lever handle
- Flat, robust design
- Max. clamping force 10 kN
- Positive-fit lo king
- Large clamping range
- Body made from special cast iron
- Supplied with guideway and fixing mate ials

Jaw width mm	Clamp Ø mm	max. clamp force kN	L mm	H mm	H1 mm	Weight kg	art.no.	€
110	130	10	280	82	50	12.5	**451560** 0110	495,–
135	160	10	328	90	50	19	451560 0135	589,–

4144

ATORN® Workpiece stop, T-slot

- **Adjustable through fi e axes**
- For use on drilling and milling machines
- Quick to set, fl xible, sturdy
- 12 and 14 mm T-slot nuts with M8 thread

Designation	art.no.	€
Workpiece stop with T-slot nuts 12 and 14 mm	**466597** 0001	182,50
	4139	

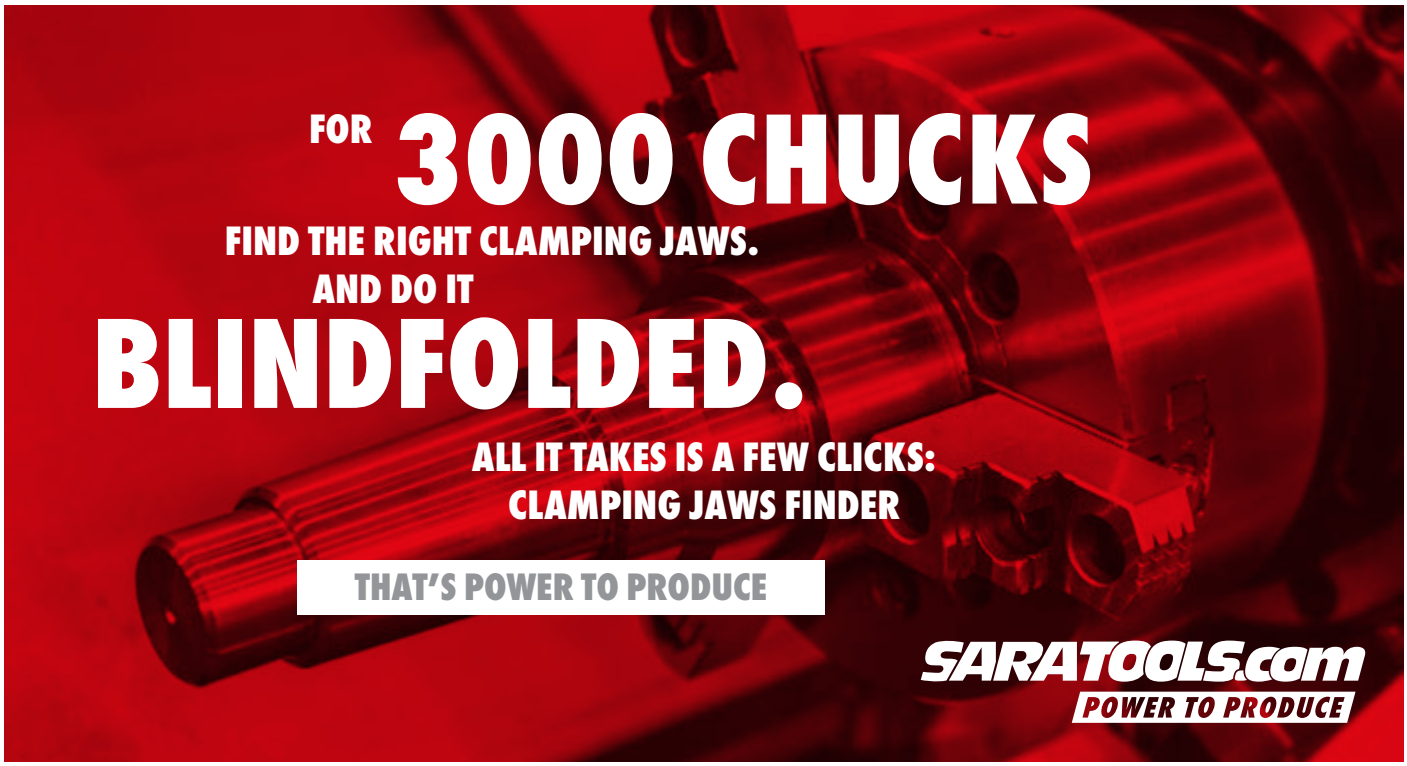
T-slot nut for workpiece stop

Designation	art.no.	€
T-slot nut 12 mm	**466594** 0012	2,82
T-slot nut 14 mm	466594 0014	3,10
T-slot nut 16 mm	466594 0016	5,–
T-slot nut 18 mm	466594 0018	6,10
	4158	

SARA® Workpiece stop, magnetic

- Compatible with all vices
- No threaded bores required
- Stop rod length 125 mm
- Adjustable fixing magn ts

Total height mm	art.no.	€
100	**466596** 0001	99,50
	4117	



SARA® Side and pull-down clamping jaws

- High-quality tool steel hardened by a subsequent oxidation process
- Lateral stop via M8 attachment hole
- Greatest precision when clamping by pressing the tool **simultaneously** when clamping on the base and lateral stop.
- Option for rapid switching from pulling left to pulling right
- Side pull to 0.5 mm
- Pull-down to 2.25 mm

- **Note:** use of clamping jaws in pairs is recommended

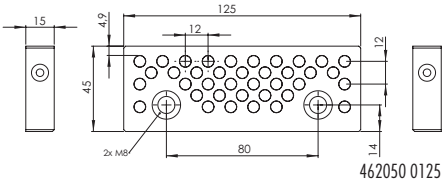
Clamping jaws for NC vices
- **ATORN** MMG 125
- **Röhm** RKE 125 / RKG 125
- **Gressel** Gripos GPS 125
- **Allmatic** Basic 125 / LC 125 / HD 125

Jaw width mm	Jaw height mm	art.no.	€
125	40	**462100** 0125	325,–

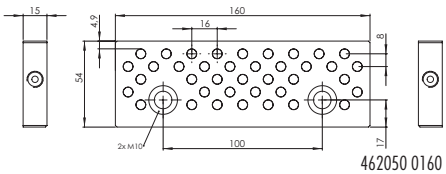
4140

ATORN® Clamping jaws with positioning pins

- Fast and precise machining of various workpieces
- Retooling in seconds for various machining tasks
- Loose underlays are no longer needed, nor is time-consuming cleaning
- Stable and robust lightweight design
- Also suitable for high clamping forces.
- Compressed air fl w via vents on both front faces
- Recommended air pressure: 5.5 bar
- Closed on all sides when installed, so very low-maintenance
- Premium tool steel, hardened, ground and treated with a special oxidation process



462050 0125

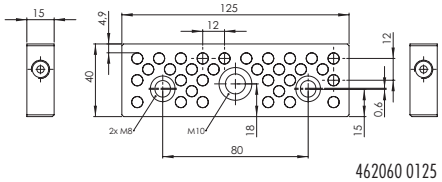


462050 0160

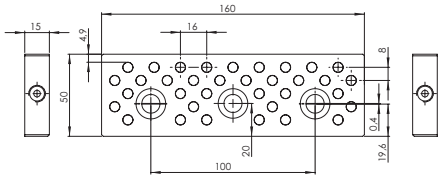
Clamping jaws for Hilma
- **Hima** NC125/160, EL125/160, KNC125/160

Jaw width mm	art.no.	€
125	**462050** 0125	265,–
160	462050 0160	359,–

4183



462060 0125



462060 0160

Clamping jaws for ATORN, Allmatic, Röhm, Gressel, Kesel
- **ATORN** MM-G 125/160
- **Allmatic** 125/160
- **Arno** 125/160
- **Gressel** Gripos 125/160, Grepos-5X, Grefors, Duogrip, Ecopos, C2
- **Röhm** RKE 125/160, RKG 125/160

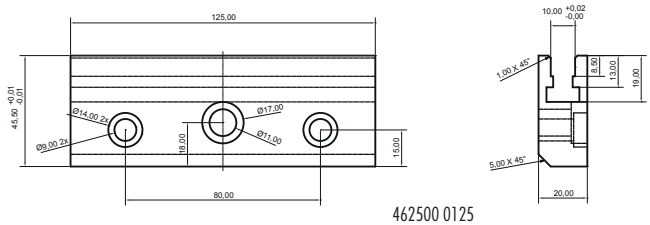
Jaw width mm	art.no.	€
125	**462060** 0125	265,–
160	462060 0160	359,–

4183

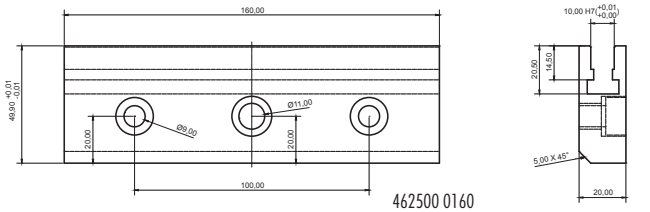
SARA® Adjustable vice jaws

- Universal jaws for diffe ent component forms
- For machining unfinished and finished p ts
- For clamping round and flat mate ials
- Simple adjustment of the top jaws

- **Supplied with:**
  2 x base jaw
  4 x combi-jaw, fla
  4 x combi-jaw, round
  (without attachment screws)



462500 0125

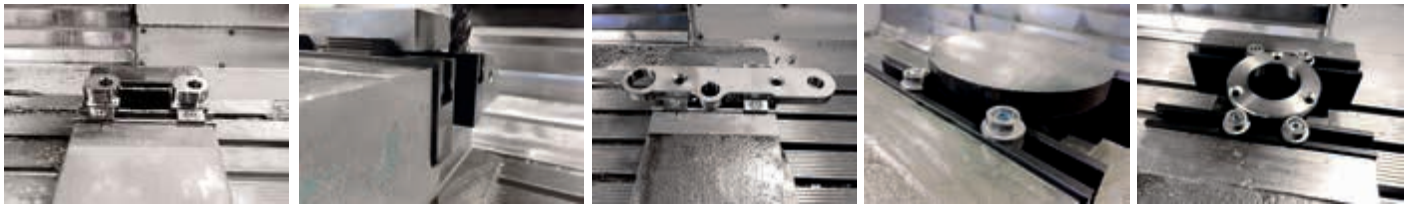


462500 0160

Clamping jaws suitable for various ATORN, Allmatic, Kesel and Röhm models

Jaw width mm	art.no.	€
125	**462500** 0125	460,–
160	462500 0160	480,–

4166



SARA® Gripper jaws with support bar

- Hardened tool steel
- **Variable support height 3 mm and 5 mm** by simply turning the support bar

For ATORN MM-G, Röhm RKG-M, RKD, RKE and Allmatic Basic

- Price per pair

Jaw width mm	art.no.	€
125	**461020** 0125	260,–

4166

For Hilma-NC and EL

- Price per pair

Jaw width mm	art.no.	€
125	**461021** 0125	260,–

4166

ATORN® Quick-change jaw system

Quick-change system

- **The system can be adapted to all known vices; this level of compatibility makes it extremely fl xible.**
- The holding, guiding and locking concept offe s maximum reliability in production
- Unprecedented cost-effecti eness and measurable benefits in dai y use
- Top jaws are quick to change in less than 30 seconds, leading to significant y reduced tooling costs

Top jaws

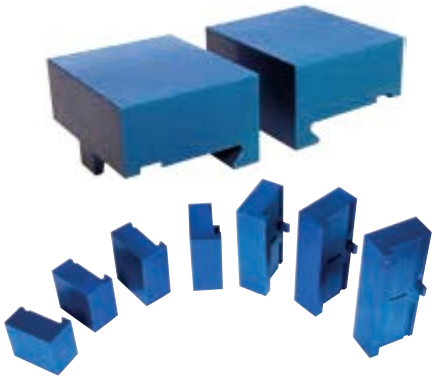
- Top jaws made from high-strength aluminium and case-hardened steel are available in various widths.
- The wide variety and numerous combination options can accommodate almost any clamping task
- Milling-off old clamping contou s allows the top jaws to be used multiple times.

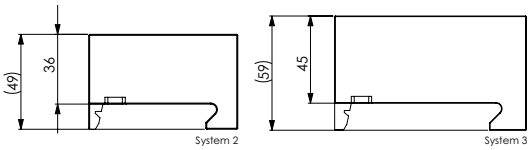
Base jaw set

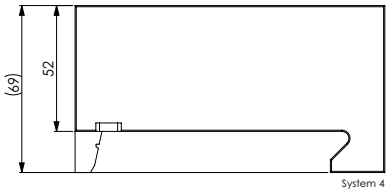
- Price per pair

for type	Jaw width mm	for system	art.no.	€
ATORN mm -G	125	3	**461025** 0018	405,–
ATORN 5-axis compact clamp	125	3	461025 0088	405,–
Allmatic Centro Grip	125	3	461025 0001	405,–
Allmatic Duo Plus mech., all mod.	125	3	461025 0003	809,–
Allmatic LC/TC from May 98	125	3	461025 0007	405,–
Allmatic LC/TC up to April 98	125	3	461025 0006	405,–
Allmatic T-Rex (14 mm slot)	125	3	461025 0013	405,–
Allmatic T-Rex (XL)	125	3	461025 0014	405,–
Allmatic Titan	125	3	461025 0015	405,–
Arnold Arno NC Twin	125	3	461025 0017	719,–
Fresmak Arnold MB2	125	3	461025 0019	405,–
Fresmak Arnold Twin	90	2	461025 0021	509,–
Fresmak Arnold Twin	125	3	461025 0022	719,–
Garant NC-LC	125	3	461025 0023	405,–
Garant NC-TC	125	3	461025 0024	405,–
Gressel Centrinos	65	2	461025 0027	235,–
Gressel Centrinos	100	2	461025 0028	345,–
Gressel Duogrip, all types	100	3	461025 0029	519,–
Gressel Duogrip, all types	125	3	461025 0030	609,–
Gressel Grepos 5X	125	3	461025 0031	465,–
Gressel Gripos, all types	100	3	461025 0032	375,–
Gressel Gripos, all types	125	3	461025 0033	435,–
Hilma CS	80	2	461025 0040	275,–
Hilma DCS	80	2	461025 0041	455,–
Hilma DS/TS	100	2	461025 0042	609,–
Hilma DS/TS	125	3	461025 0043	719,–
Hilma KNC	100	3	461025 0045	345,–
Hilma KNC	125	3	461025 0046	405,–
Hilma KNC	160	4	461025 0047	619,–
Hilma SCS	80	2	461025 0048	275,–
Hilma SCS	120	3	461025 0049	405,–
Röhm KZS, all types	80	2	461025 0052	275,–
Röhm KZS, all types	125	3	461025 0053	405,–
Röhm RKD, all types	125	3	461025 0057	609,–
Röhm RKE/RKG, all types	125	3	461025 0058	405,–
Röhm RKE	160	4	461025 0059	619,–
Röhm RKZ, all types	125	3	461025 0061	405,–
SCHUNK KSP-250, KSH-250, all types	125	3	461025 0076	405,–
WNT DSG	125	3	461025 0078	609,–
WNT NCG	125	3	461025 0082	435,–
WNT ZSG	125	3	461025 0085	405,–

4183







Aluminium top jaws

- Price per unit

Jaw width mm	System	art.no.	€
65	2	**461026** 2065	38,20
70	2	461026 2070	41,90
80	2	461026 2080	46,70
90	2	461026 2090	51,50
100	2	461026 2100	56,50
125	2	461026 2125	68,–
160	2	461026 2160	83,50
180	2	461026 2180	93,–
80	3	461026 3080	64,50
90	3	461026 3090	70,50
100	3	461026 3100	76,50
125	3	461026 3125	91,–
140	3	461026 3140	102,–
160	3	461026 3160	114,–
180	3	461026 3180	126,–
200	3	461026 3200	137,–
225	3	461026 3225	152,–
250	3	461026 3250	166,–
80	4	461026 4080	84,50
100	4	461026 4100	101,–
125	4	461026 4125	121,–
160	4	461026 4160	149,–
200	4	461026 4200	182,–
250	4	461026 4250	220,–
300	4	461026 4300	265,–
400	4	461026 4400	345,–

4183

Steel top jaw

- Price per unit

Jaw width mm	System	art.no.	€
65	2	**461027** 2065	47,30
70	2	461027 2070	52,–
80	2	461027 2080	57,50
90	2	461027 2090	63,50
100	2	461027 2100	69,–
125	2	461027 2125	83,–
160	2	461027 2160	101,–
180	2	461027 2180	113,–
80	3	461027 3080	78,50
90	3	461027 3090	85,50
100	3	461027 3100	92,–
125	3	461027 3125	109,–
140	3	461027 3140	122,–
160	3	461027 3160	136,–
180	3	461027 3180	149,–
200	3	461027 3200	162,–
225	3	461027 3225	179,–
250	3	461027 3250	196,–
80	4	461027 4080	103,–
100	4	461027 4100	121,–
125	4	461027 4125	145,–
160	4	461027 4160	177,–
200	4	461027 4200	215,–
250	4	461027 4250	260,–
300	4	461027 4300	310,–
400	4	461027 4400	400,–

4183

Lifter

Description	art.no.	€
Suitable for all systems	**461021** 0000	43,–

4183

SARA® Parallel underlays sets

- All surfaces are plane-parallel, rectangular and ground in pairs
- Height tolerance ± 0.01 mm
- For height adjustment when clamping workpieces; particularly suitable for seating in machine vices, marking tables or machine tools
- Supplied in a wooden box

Contents	Length mm	Width mm	Total height mm	art.no.	€
8 pairs	120	8	12, 17, 22, 25, 28, 32, 36, 38	**465002** 1208	210,–
8 pairs	160	8	12, 17, 22, 25, 28, 32, 36, 38	465002 1608	260,–
9 pairs	100	4	10, 14, 18, 22, 26, 30, 34, 38, 42	465002 1004	220,–
9 pairs	160	4	10, 14, 18, 22, 26, 30, 34, 38, 42	465002 1604	260,–

4153

ATORN® Parallel supports, magnetic

- Hardened tool steel
- Burnished
- Height tolerance ± 0.01 mm
- 2.5 mm wide, allowing bores to be drilled near vice jaws

Single

Jaw width mm	Total height mm	art.no.	€
125	20	**465006** 1220	68,–
125	25	465006 1225	68,–
125	30	465006 1230	68,–
125	37	465006 1237	68,–
125	39	465006 1239	68,–

4183

Sets

Jaw width mm	Contents per set	art.no.	€
100	Height 20, 27, 29, 31, 32 mm	**465006** 0100	325,–
125	Height 15, 30, 35, 37, 39 mm	465006 0125	340,–
160	Height 22, 30, 37, 42, 47 mm	465006 0160	350,–

4183

Parallel support sets

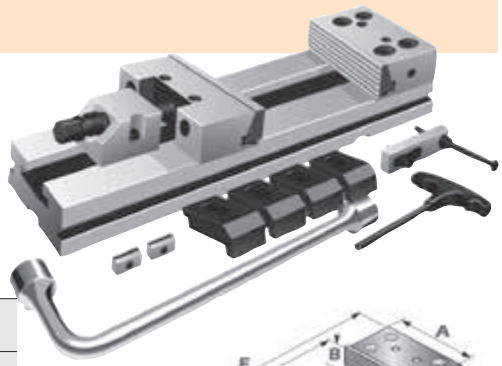
- **In a wooden stand**
- Aged steel, case-hardened and ground in pairs
- Pair tolerance hight ± 0.01 mm
- Machined to plane-parallel and true-angle finis
- The cross section is stamped into the ground front face
- For use as parallel workpiece mounts in machine vices, marking tables or machine tools for drilling, grinding, milling, planing, marking and measuring; especially suitable for holding in machine vices, marking tables or machine tools

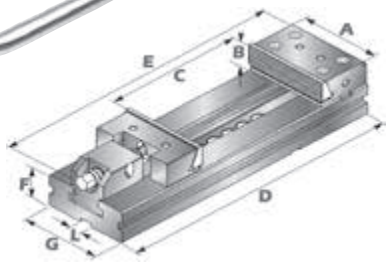
Length mm	Pair/set increasing at intervals of 1 mm	Cross section mm	art.no.	€
100	20 pairs, 2-24	2x 5 2x10 2x15 2x20 3x 6 , 3x11 3x16 3x21 4x 7 4x12 , 4x17 4x22 5x 8 5x13 5x18 , 5x23 6x 9 6x14 6x19 6x24	**465005** 0020	410,–
125	24 pairs, 8-42 (except 9 mm)	8x11 8x16 8x21 8x26 8x31 8x36 , 10x13 10x18 10x23 10x28 10x33 10x38 , 12x15 12x20 12x25 12x30 12x35 12x40 , 14x17 14x22 14x27 14x32 14x37 14x42	465005 0025	519,–
150	24 pairs, 8-42 (except 9 mm)	8x11 8x16 8x21 8x26 8x31 8x36 , 10x13 10x18 10x23 10x28 10x33 10x38 , 12x15 12x20 12x25 12x30 12x35 12x40 , 14x17 14x22 14x27 14x32 14x37 14x42	465005 0050	539,–

4153

SARA® Mechanical precision machine vice

- Mechanical precision vice
- Accuracy: within 0.02 mm
- Base body made from hardened steel, 60 HRc
- Fixed jaw can be rotated 180°; equipped with a jaw step on the reverse side
- Supplied with stop, clamping claws, 16 x 16 mm slot nuts and chuck key





A mm	B mm	C mm	D mm	E mm	F mm	G mm	L mm	Weight kg	art.no.	€
125	40	150	345	410	40	95	16	12.9	**460200** 0125	659,–
150	50	200	420	500	50	125	16	25.5	460200 2150	719,–
150	50	300	520	600	50	125	16	29	460200 3150	829,–
175	60	200	455	530	58	145	16	37	460200 2175	1.019,–
175	60	300	555	630	58	145	16	42	460200 3175	1.089,–
175	60	400	655	730	58	145	16	47	460200 4175	1.259,–
200	65	300	595	680	70	170	16	69	460200 3200	1.549,–
200	65	400	695	780	70	170	16	74	460200 4200	1.799,–
300	80	300	635	730	78	195	16	130	460200 3300	2.499,–
300	80	400	735	830	78	195	16	140	460200 4300	2.979,–

4170

Swivel base with degree setting

suitable for jaw width mm	Angle precision	art.no.	€
125	1°	**460222** 0125	350,–
150	1°	460222 0150	410,–
175	1°	460222 0175	450,–
200	1°	460222 0200	659,–
300	1°	460222 0300	819,–

4171

Slot nuts

- Price per pair

Groove dimensions device mm	Groove dimensions machine mm	art.no.	€
16	10	**460213** 1610	28,50
16	12	460213 1612	28,50
16	14	460213 1614	28,50
16	16	460213 1616	28,50
16	18	460213 1618	28,50
16	20	460213 1620	28,50
16	22	460213 1622	28,50
16	24	460213 1624	28,50
16	28	460213 1628	28,50
16	36	460213 1636	28,50

4171

V-block jaw

- Price per unit

suitable for jaw width mm	art.no.	€
125	**460217** 0125	119,–
150	460217 0150	169,–
175	460217 0175	255,–
200	460217 0200	335,–
300	460217 0300	599,–

4171

Clamping jaw, extra high

- Price per unit

suitable for jaw width mm	art.no.	€
125	**460224** 0125	205,–
150	460224 0150	235,–
175	460224 0175	330,–
200	460224 0200	460,–
300	460224 0300	719,–

4171

Coordinate V-jaw

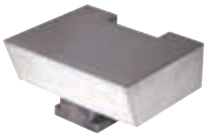
- Price per unit

suitable for jaw width mm	art.no.	€
125	**460223** 0125	305,–
150	460223 0150	380,–
175	460223 0175	549,–
200	460223 0200	759,–
300	460223 0300	1.139,–

4171

Pull-down jaw

- Price per unit

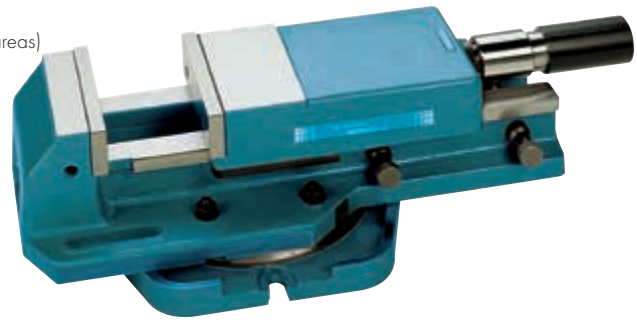


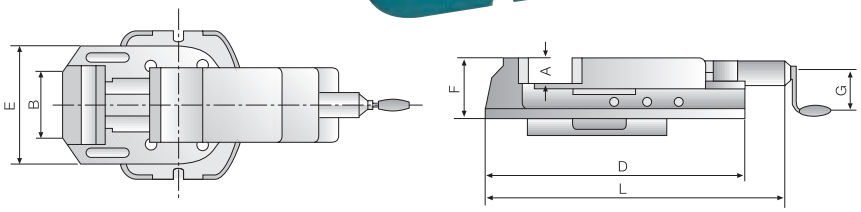
suitable for jaw width mm	art.no.	€
125	**460225** 0125	179,–
150	460225 0150	220,–
175	460225 0175	255,–
200	460225 0200	360,–
300	460225 0300	539,–

4171

High-pressure machine vice

- **Mechanical/mechanical** or **mechanical/hydraulic**
- Base body and clamping jaw holder made from high-quality ductile iron, GJS 70
- Clamping precision within 0.01 mm at the same clamping pressure
- Both clamping areas can be roughly set in a matter of seconds via bolts (covered clamping areas)
- Aligned on the work table via longitudinal or transverse slots (20H7) in the base surface
- All wearing parts, clamping jaws and guideways hardened and ground (60 HRc)
- Multiple vices of the same height are available with a **pair accuracy of 0.01 mm**
- Spindle can be optionally replaced with a pneumatic/hydraulic version
- Supplied with 1 pair of smooth jaws and 1 hand crank, **without swivel base**





Jaw width mm	Clamp force kN	Clamping range mm	A mm	D mm	E mm	F mm	L mm	Weight kg	mech./hydr. art.no.	€	mech./mech. art.no.	€
125	40	0 - 205	40	425	195	107	480 - 685	26	**458601** 0125	1.599,–	**458603** 0125	1.649,–
160	50	0 - 305	50	570	250	130	565 - 870	51	458601 0160	2.059,–	458603 0160	2.089,–
200	80	0 - 375	63	680	300	160	720 - 1095	94	458601 0200	3.099,–	458603 0200	3.149,–
									4143		4143	

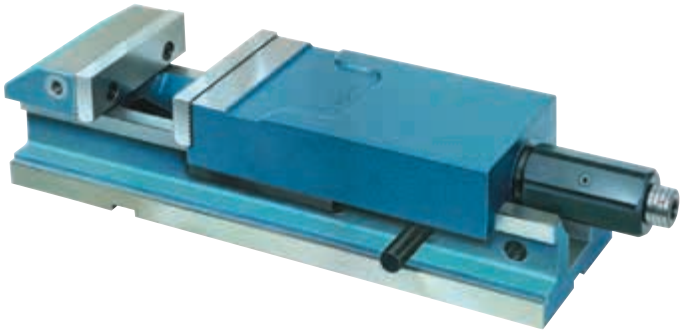
Turning insert

- **Note:** Angular accuracy is only guaranteed when purchased with vice!

Jaw width mm	art.no.	€
125	**458606** 0125	265,–
160	458606 0160	316,–
200	458606 0200	365,–
	4143	

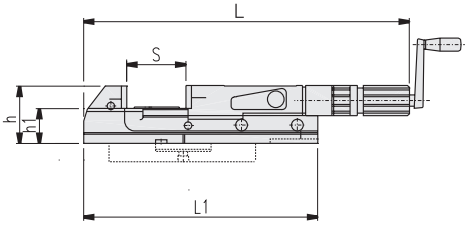
ATORN® High-pressure machine vice

- **Mechanical/hydraulic**
- Steel base body
- Guideways hardened and ground
- Aligned on the work table via longitudinal or transverse slot 20 H7
- Quick adjustment via bolts
- Setting mechanism for quickly pre-selecting the clamping force
- Supplied with 1 set of smooth jaws, 4 clamping claws and a hand crank



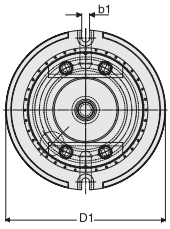
Vice

Jaw width mm	Clamp force kN	L mm	L1 mm	h mm	h1 mm	S mm	art.no.	€
90	25	553	370	99	53	150	**457100** 0090	1.509,–
125	40	681	470	112	70	220	457100 0125	1.779,–
							4144	



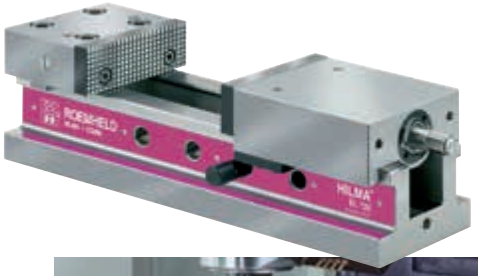
Turning insert

Jaw width mm	D1 mm	b1 mm	art.no.	€
90	242	14	**457101** 0090	360,–
125	280	16	457101 0125	465,–
			4144	

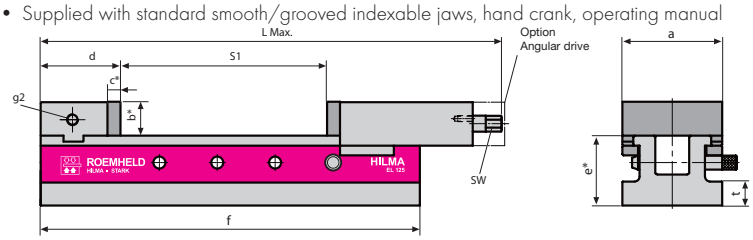


ROEMHELD HILMA ▪ STARK EuroLine NC high-pressure machine vice

- **Type EL, mechanical-hydraulic**
- **Dependable and cost-effecti e**
- Threaded bores for workpiece stops in both sides of the fi ed jaw as standard
- Replaceable, hardened clamping jaws (1st side smooth, 2nd side grooved)
- Guideways hardened and ground
- Desired clamping range can be roughly pre-selected via socket pin
- Spindle and power transmission integrated and protected inside the slide body
- Straightforward maintenance and cleaning: the slide body can be removed in a single action
- For tool and mould making, fixtu e construction, production



- Supplied with standard smooth/grooved indexable jaws, hand crank, operating manual



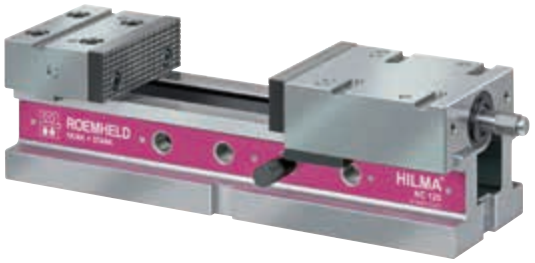
- 457001 2161 = incl. angular drive

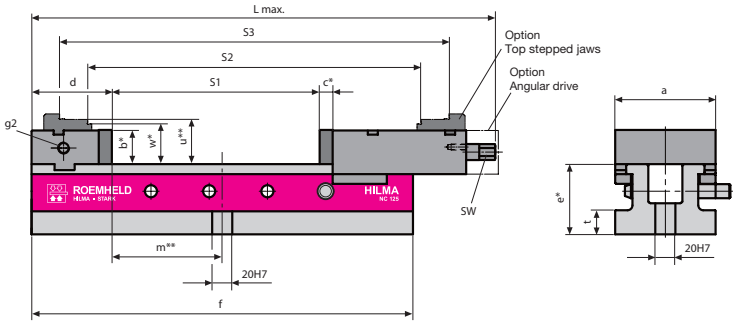
Jaw width mm	Clamp force kN	Crank force N	Clamp width S1 mm	L max. mm	Weight kg	b mm	c mm	d mm	f mm	art.no.	€
100	25	50	205	464	18.5	34	13	80	380	**457001** 2100	1.488,–
125	40	75	225	526	31.5	45	15	100	430	457001 2125	1.526,–
160	50	95	309	684	58.5	54	18	120	550	457001 2160	2.168,–
160	50	95	509	884	75	54	18	120	750	457001 2161	3.357,–

4146

ROEMHELD HILMA ▪ STARK NC NC high-pressure machine vice

- **Type NC, mechanical-hydraulic**
- **versatile and fl xible**
- Longitudinal and transverse slots as standard for quick positioning
- Slots and threaded bores on slide and fi ed jaw for holding standard and special large-span jaws
- Threaded holes on both sides for workpiece stops
- Clamping edge for clamping claws
- Hardened and ground guideways
- Rough pre-selection of the desired clamping range via socket pin
- Resistant to deformation thanks to the new bottom cross section and new fi ed jaw
- Mounting hole layout for extra high clamping jaws
- For tool and mould making, fixtu e construction, production
- Supplied with standard smooth/grooved indexable jaws, hand crank, operating manual
- **Version with clamp force monitoring available on request (cannot be retrofit ed!)**





Type NCH, hydraulically operated – available on request

Jaw width mm	Clamp force kN	Crank force N	Crank radius mm	Clamp width S1 mm	Clamp width S2 mm	Clamp width S3 mm	L mm	b mm	c mm	d mm	e mm	d1 mm	d2 mm	u mm	w mm	Weight kg	art.no.	€
100	25	50	80	205	330	386	464	34	13	80	78	56	28	45	40	18.5	**457020** 0100	1.767,–
125	40	75	100	225	363	431	526	45	15	100	82	69	35	58	53	31.5	457020 0125	1.951,–
160	50	95	125	309	503	573	684	54	18	120	95	72	37	70	65	58.5	457020 0160	2.571,–

4146

Top stepped jaws for type NC

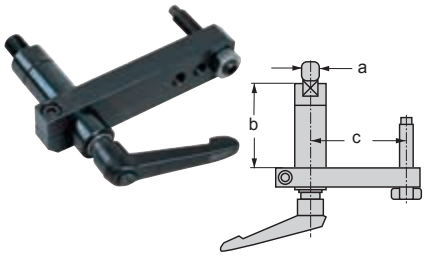
- For extremely large clamping widths
- Includes fastening screws
- Unit prices

Jaw width mm	Total height mm	Clamping depth mm	for fi ed jaws art.no.	for fi ed jaws €	for slides art.no.	for slides €
100	16.5	5	**457503** 0100	189,–	**457504** 0100	195,–
125	19	5	457503 0125	196,–	457504 0125	205,–
160	22	5	457503 0160	220,–	457504 0160	239,–
			4146		4146	

ROEMHELD HILMA ▪ STARK Accessories for Hilma KNC / NC / EL

Precision workpiece stop for type EL, NC, KNC

- Can be swivelled out of the way, features quick-action clamp
- 2 level adjustment



Jaw width mm	d mm	Thread	art.no.	€
100/125	95	M 12	**458515** 1012	91,–
160	124	M 20	458515 1620	119,–
			4145	

Angular drive for type EL, NC

- For mechanical-hydraulic machine vices and clamping systems
- Used when normal operation is hindered or not possible
- Also ideal for retrofittin

Jaw width mm	a mm	Crank radius mm	Wr. width mm	art.no.	€
100	39	125	10	**458501** 0100	364,–
125	43	125	10	458501 0125	404,–
160	46	125	10	458501 0160	446,–
				4145	

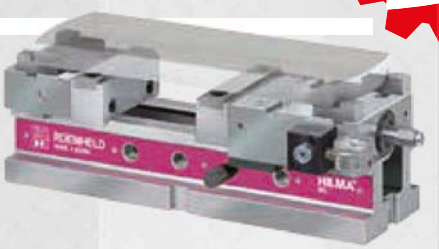
Clamping claws with screws, for type EL and NC

- Price per set of 4 units

suitable for	Screw	Clamp height mm	art.no.	€
NC 100	M 12 X 45 DIN 912	24	**458520** 1012	94,–
NC 125/160	M 12 X 45 DIN 912	27	458520 1016	95,–
NC 160	M 16 X 50 DIN 912	27	458520 1600	96,–
			4145	

Expand HILMA machine vices with clamping force display

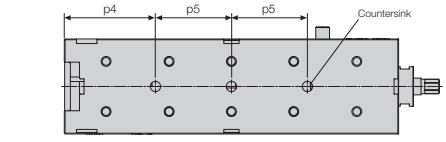
Clamp raw parts with clamping bars with smooth, grip or carbide-coated replaceable insert

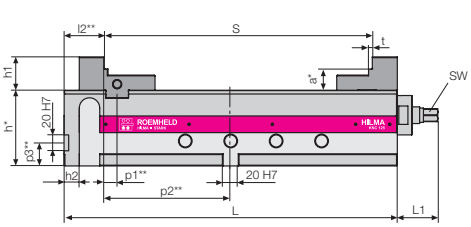


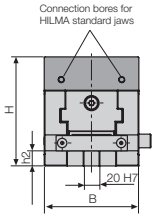
Clamp round or raw parts with grip or carbide-coated replaceable inserts for slots and fixed jaws

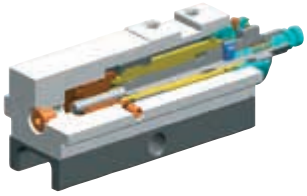
ROEMHELD HILMA ▪ STARK KNC NC high-pressure machine vice

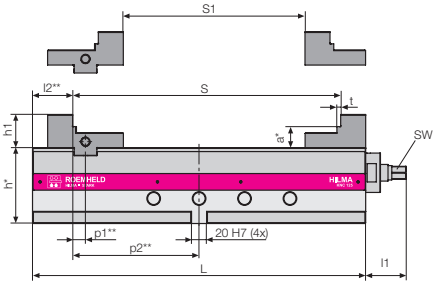
- **KNC type, mechanical-hydraulic**
- **For the toughest requirements**
- Fully encapsulated spindle and power transmission, reliable protection against chips
- With stepped indexable jaws as standard, smooth rear side, with connection bores for almost all HILMA clamping jaw systems
- Desired clamping range can be roughly pre-selected via socket pin
- Locking device for mechanically clamping sensitive workpieces (optional accessories)
- All-steel design with internal slide guide
- 20 H7 cross slots for horizontal clamping

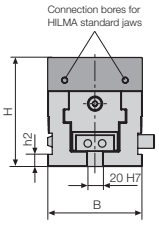












Type	Jaw width mm	Clamp force kN	Crank radius mm	L mm	Clamp Ø mm	Clamp width S1 mm	Weight kg	art.no.	€
Standard	100	25	80	300	230	140	17	**457080** 0100	2.033,–
Standard	125	40	106	440	354	240	35	457080 0125	2.243,–
Standard	160	50	125	540	436	300	72	457080 0160	2.960,–
Universal	100	25	80	300	230	140	17	457080 1100	2.338,–
Universal	125	40	106	440	354	240	35	457080 1125	2.621,–
Universal	160	50	125	540	436	300	72	457080 1160	3.329,–

4146

Clamping claws with screws for type KNC

- Price per set of 4 units

suitable for jaw width mm	Clamp height mm	Screw	art.no.	€
100 / 125	16	M12 x 30	**457088** 1210	94,–
100 / 125	16	M16 x 40	457088 1610	94,–
160	20	M12 x 35	457088 1212	95,–
160	20	M16 x 40	457088 1216	96,–

4146

Angular drive for type KNC

- For changing the direction of the hand crank

suitable for jaw width mm	Wr. width mm	art.no.	€
100	14	**457084** 0100	575,–
125 / 160	17	457084 0125	626,–

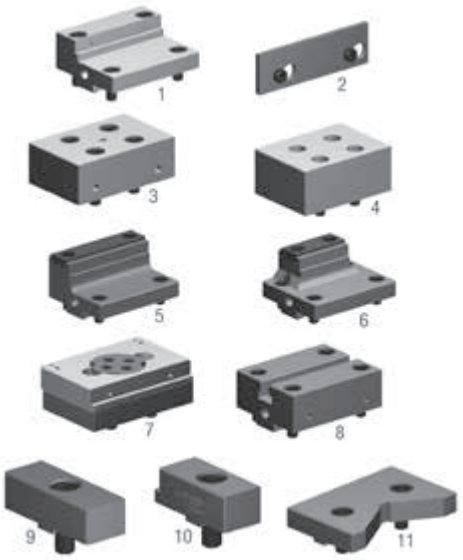
4146

Continued on next page >>>

Clamping jaws

• Price per unit

Description	Illustration	Jaw width 100 art.no.	€	Jaw width 125 art.no.	€	Jaw width 160 art.no.	€
Stepped indexable jaw, fi ed	1	**457081** 0010	151,–	**457082** 0010	194,–	**457083** 0010	254,–
Stepped indexable jaw, movable	1	457081 0011	141,–	457082 0011	184,–	457083 0011	238,–
Finely stepped strip, standard	2	457081 0020	42,–	457082 0020	44,–	457083 0020	51,–
Finely stepped strip, low	2	457081 0021	42,–	457082 0021	44,–	457083 0021	51,–
Block jaw, hardened, fi ed	3	457081 0030	216,–	457082 0030	249,–	457083 0030	342,–
Block jaw, hardened, movable	3	457081 0031	210,–	457082 0031	241,–	457083 0031	329,–
Block jaw, soft, fi ed	4	457081 0040	126,–	457082 0040	174,–	457083 0040	236,–
Block jaw, soft, movable	4	457081 0041	111,–	457082 0041	156,–	457083 0041	212,–
Clamping jaw, extra high, fi ed	5	457081 0050	264,–	457082 0050	314,–		
Clamping jaw, extra high, movable	5	457081 0051	241,–	457082 0051	276,–		
Clamping jaw, extra high, offs t, fi ed	6	457081 0060	273,–	457082 0060	322,–		
Clamping jaw, extra high, offs t, movable	6	457081 0061	251,–	457082 0061	284,–		
Pendulum jaws	7			457082 0070	462,–	457083 0070	533,–
SlimFlex jaw, fi ed	8	457081 0080	258,–	457082 0080	334,–	457083 0080	417,–
SlimFlex jaw, movable	8	457081 0081	233,–	457082 0081	314,–	457083 0081	396,–
SlimFlex insert, soft	9	457081 0082	27,–				
SlimFlex step insert	10	457081 0083	50,–				
SlimFlex V-block insert	11	457081 0084	88,–				
		4146		4146		4146	

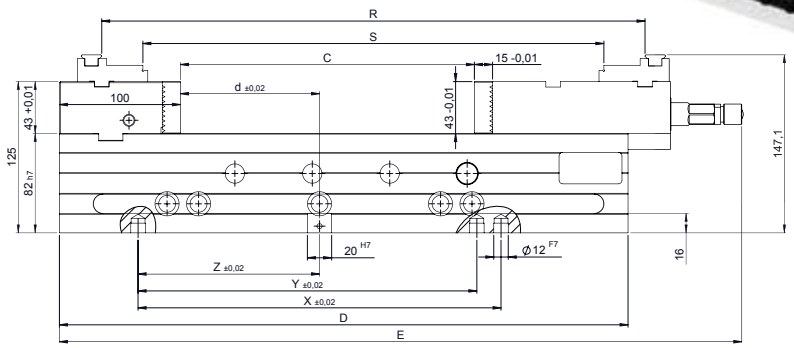


... from Ø 0.2 mm

ATORN®
High quality for great performance

ATORN® NC high-pressure machine vice MH-S 125

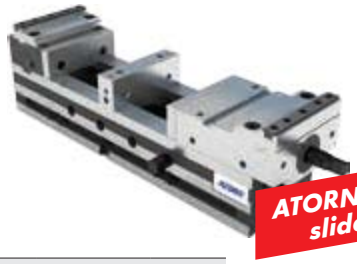
- **Mechanical/hydraulic**
- Robust steel base body
- Hardened and ground guideways
- Repetition precision ≤ 0.01 mm
- Versions with fastening bores for lateral clamping available on request,
  For bed length D = 470 mm, attachment screws for groove spacing 63 mm and 100 mm are pre-mounted
- Locating pin for quick pre-positioning
- Simple cleaning due to removable upper slides
- **Bed lengths up to 1200 mm and hydraulically-controlled versions available on request**
- Supplied with jaws and hand crank



Standard version mech./hydr.

Jaw width mm	D mm	E mm	d mm	X mm	Y mm	Z mm	C mm	R mm	S mm	Weight kg	art.no.	€
125	470	564	115	300	280	150	0 - 239	131 - 445	63 - 377	37.6	**458100** 1125	1.934,–
125	534	628	167	400	-	200	0 - 303	131 - 509	63 - 441	41.7	458100 2125	2.177,–
125	598	692	199	500	480	250	0 - 367	131 - 573	63 - 505	45.1	458100 3125	2.407,–
125	662	756	231	500	480	250	0 - 431	131 - 637	63 - 569	48.5	458100 4125	2.644,–
125	726	820	263	500	480	250	0 - 495	131 - 701	63 - 633	51.9	458100 5125	2.882,–
125	790	884	295	500	480	250	0 - 559	131 - 765	63 - 697	55.3	458100 6125	3.275,–
125	854	984	327	500	480	250	0 - 623	131 - 829	63 - 761	58.7	458100 7125	3.669,–
125	918	1012	359	500	480	250	0 - 687	131 - 893	63 - 825	62.1	458100 8125	4.072,–

4144

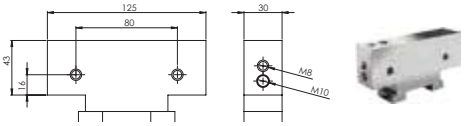


ATORN MH-S with interchangeable slider for multiple clamping

Interchangeable slider

Jaw width mm	art.no.	€
125	**458113** 0125	214,–

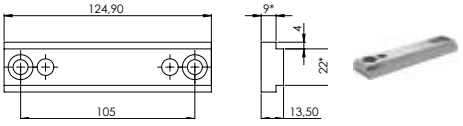
4144



Top stepped jaws for interchangeable slider

Jaw width mm	art.no.	€
125	**458112** 0125	142,–

4144



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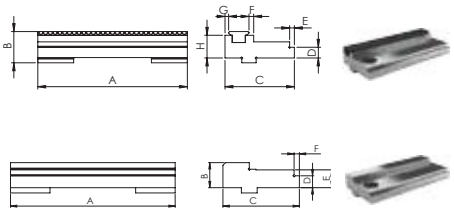
Top stepped jaws

• Price per unit

Type	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	art.no.	€
With grip	125	26.1	58	9	4	4	3	19	**458111** 1125	255,–
Without grip	125	19	58	9	14	4	-	-	458111 0125	186,–

4144

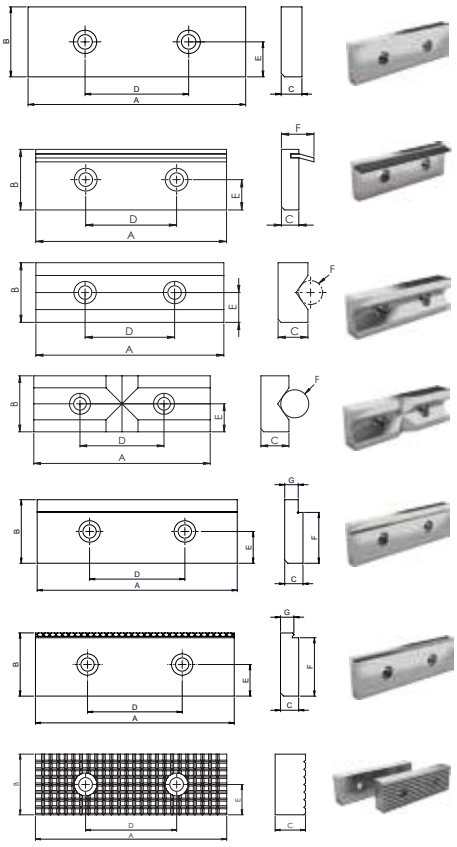


Screw-in jaws

• Price per unit

Type	A mm	B mm	C mm	D mm	E mm	F mm	G mm	art.no.	€
With grinding allowance	125	43.4	15.4	80	16	-	-	**458110** 0125	28,10
Pull-down jaws with spring leaf	125	43	11.5	80	16	21.5	-	458110 6125	88,70
V-block jaws	125	43	20	80	16	8 - 38	-	458110 3125	96,10
V-block jaws horiz. and vert.	125	43	20	80	16	8 - 38	-	458110 4125	136,–
Stepped jaws	125	43	11.5	80	16	35	8.5	458110 1125	82,10
Stepped jaws with grip	125	43	11.5	80	16	40	8.5	458110 2125	163,–
Indexable jaws	125	43	15	80	16	-	-	458110 5125	47,80

4144

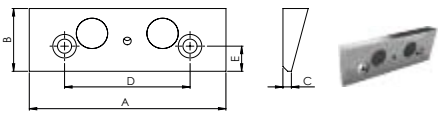


Base jaw with magnet for quick-change jaw system

• Price per unit

A mm	B mm	C mm	D mm	E mm	art.no.	€
125	43	6	80	16	**458114** 0125	169,–

4144

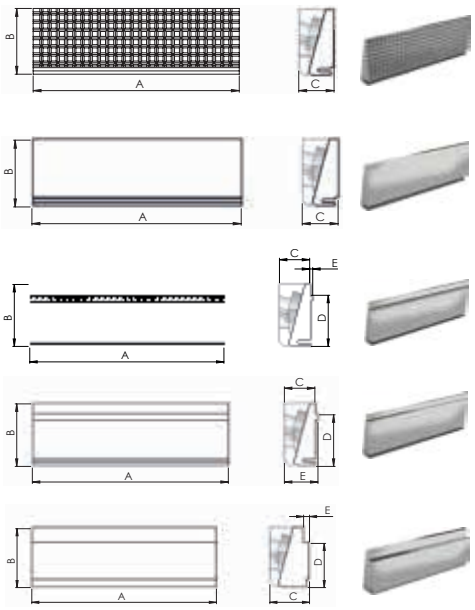


Interchangeable jaws for quick-change jaw system

• Price per unit

Type	A mm	C mm	B mm	D mm	E mm	art.no.	€
grooved	125	21.5	43	-	-	**458115** 1125	161,–
smooth	125	21.5	43	-	-	458115 0125	161,–
Grooved line	125	21.5	43	37	2	458115 3125	177,–
Smooth line	125	21.5	43	37	2	458115 2125	161,–
With step	125	26.9	43	33	4	458115 4125	178,–

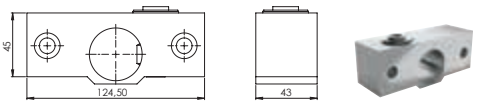
4144



Angle drive

for type	art.no.	€
MH-S 125	**458117** 0125	427,–

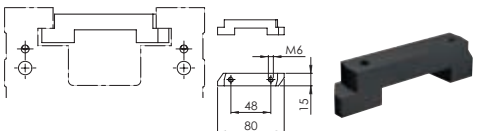
4144



Rhombic T-slot nut

for type	art.no.	€
MH-S 125	**458116** 0125	38,20

4144



Clamp set for MH-S 125

• Price per set = 4 pieces

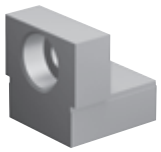
Designation	art.no.	€
Clamp set for bench groove 14 mm	**458118** 0014	95,10
Clamp set for bench groove 16 mm	458118 0016	104,–
Clamp set for bench groove 18 mm	458118 0018	96,90
Clamp set for bench groove 20 mm	458118 0020	99,60
Clamp set for bench groove 22 mm	458118 0022	101,–

4144

Positioning slot nut for MH-S 125

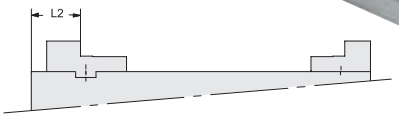
Designation	art.no.	€
Positioning slot nut for bench groove 14	**458119** 2014	26,80
Positioning slot nut for bench groove 16	458119 2016	40,40
Positioning slot nut for bench groove 18	458119 2018	26,70
Positioning slot nut for bench groove 20	458119 2020	40,–
Positioning slot nut for bench groove 22	458119 2022	40,–

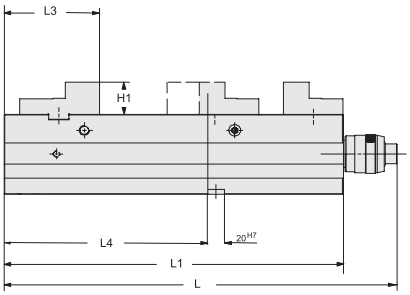
4144

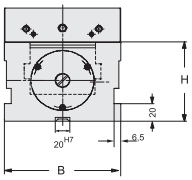


ATORN® MM-G NC high-pressure machine vice

- **Mechanical/mechanical**
- Base body made from spheroidal graphite iron
- Base clamping
- Pull-down jaws and other accessories available on request
- Stepped jaws, reversible, hardened and ground
- Long clamping slide assembly including a transverse slot drive spindle with pre-set clamping force
- M12 mounting thread for workpiece stop
- Clamping surfaces for clamping claws
- Rugged chip guard prevents chip ingress into the body
- **Incl. clamping fitting bo e (pitch 200 mm) for ATORN zero-point clamping system**







Compact clamp

- Incl. stepped jaws and regulator

Jaw width mm	Clamp force kN	L mm	L1 mm	L2 mm	L3 mm	L4 mm	H mm	H1 mm	Clamping range mm	Weight kg	art.no.	€
125	40	463	400	56.5	112.5	240	100	40	0 - 312	41	**458800** 0125	1.769,–
160	60	618	530	64	130	200	115	50	0 - 451	79	458800 0160	3.139,–

4144

With pendulum jaws and collar inserts

Type	Jaw width mm	Jaw height mm	art.no.	€
mm -G 125	160	20	**458801** 0125	2.199,–
mm -G 160	200	25	458801 0160	3.689,–

4144

Clamping claw

- With screw and T-slot nut
- Price per unit

T-slot size mm	Thread	art.no.	€
12	M10 x 50	**458805** 1210	33,20
14	M12 x 55	458805 1412	35,50
16	M12 x 60	458805 1612	35,50
18	M16 x 60	458805 1816	39,80
20	M16 x 65	458805 2016	39,80
22	M16 x 65	458805 2216	39,80

4144

Standard top jaws

- Price per 1-set pack

Width mm	Total height mm	art.no.	€
125	40	**458810** 0125	689,–
160	50	458810 0160	869,–

4144

Stepped jaws

- Price per 1-set pack

Width mm	Total height mm	art.no.	€
125	40	**458811** 0125	759,–
160	50	458811 0160	939,–

4144

Base jaw set for grip attachments

- Price per 1-set pack

Width mm	Total height mm	art.no.	€
125	20	**458814** 0125	829,–

4144

Grip attachments

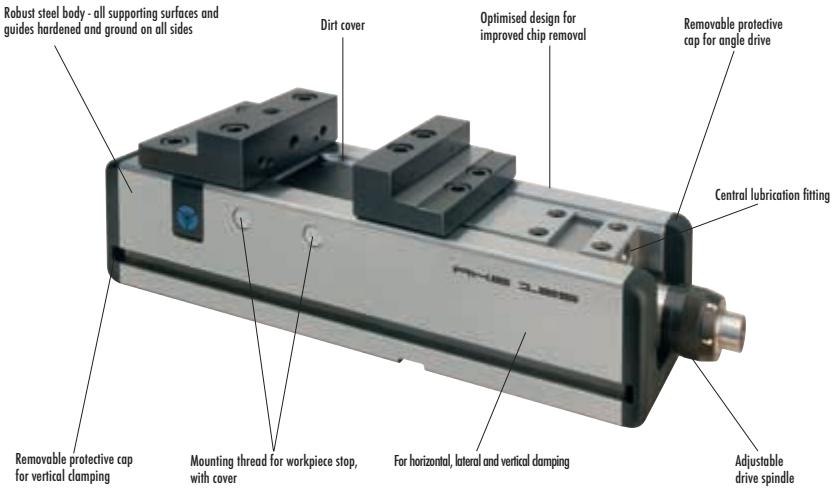
- Price per unit

Jaw width mm	Total height mm	art.no.	€
92 and 125	28	**458815** 0125	40,90

4144

RÖHM RKE NC high-pressure machine vice

- Particularly suitable for use on machining centres
- Horizontal, lateral, or vertical clamping with a base plate, for example as a DUO clamping tower (back to back)
- **Size 92**
  Mechanical-hydraulic clamping system with power transmission, manually operated.
- **Size 125, 160**
  Mechanical-mechanical clamping system with power transmission, manually operated
- Base body and all guides are hardened and ground on all sides
- Long clamping slide with transverse slots, hardened on all sides, functional surfaces ground
- Drive spindle with pre-set clamping force
- Clamping surface for clamping claws
- Central lubrication fitting or easy guide and spindle thread lubrication
- Stable chip guard prevents chips from entering into the body
- Threaded bores for holding all RÖHM flat clamping j ws with jaw widths of 125 / 160 mm
- Angle drive connecting thread



NC compact clamp

Jaw width mm	Total height mm	Jaw height mm	Total length mm	Clamping range mm	Groove dimensions device mm	Clamp force kN	Weight kg	art.no.	€
92	80	32	346	0-208	20H7	25	15	**458200** 0092	2.175,–
125	100	40	479	0-312	20H7	40	41	458200 0125	2.490,–
160	115	50	634	0-451	20H7	60	79	458200 0160	3.865,–

4190

Universal jaws

- V-block jaw and normal jaw, unhardened and burnished, with workpiece support
- Price per set

Jaw width mm	Total height mm	art.no.	€
125	39.6	**458822** 0125	81,30
160	49.6	458822 0160	107,–

4190

Standard jaws, cross-grooved

- Price per set

Jaw width mm	Total height mm	art.no.	€
90	31.6	**458819** 0092	55,30
125	39.6	458819 1125	69,20
160	49.6	458819 0160	96,70

4190

Claw jaws with 3 x 2.5 steps

- Price per set

Jaw width mm	Total height mm	art.no.	€
92	32	**458816** 0092	375,–
125	40	458816 0125	464,–
160	50	458816 0160	652,–

4190

V-block jaw

- Price per unit

Jaw width mm	Total height mm	art.no.	€
92	31.6	**458820** 0092	77,30
125	39.6	458820 0125	107,–
160	49.6	458820 0160	136,–

4190

Claw jaws without steps

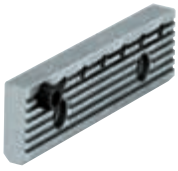
- Price per set

Jaw width mm	Total height mm	art.no.	€
92	32	**458817** 0092	309,–
125	40	458817 0125	388,–
160	50	458817 0160	542,–

4190

Standard jaws with adjustable stop

- Price per unit



Jaw width mm	Total height mm	art.no.	€
92	31.6	**458821** 0092	74,60
125	39.6	458821 0125	91,20
160	49.6	458821 0160	133,–

4190

Standard jaws

- Price per set

Jaw width mm	Total height mm	art.no.	€
92	31.6	**458818** 0092	44,30
125	39.6	458818 0125	111,–
160	49.6	458818 0160	77,30

4190

Grip attachments

- Price per unit

Jaw width mm	Total height mm	art.no.	€
160	30	**458815** 1160	43,10

4190

Continued on next page >>>

Supporting jaw set with pendulum jaws

- Supplied without grip attachments
- Price per set

for type	Jaw width mm	Total height mm	art.no.	€
RKE 92	115	20	**458812** 0092	498,–
RKE 125	160	20	458812 0125	829,–
RKE 160	200	25	458812 0160	1.330,–

4190

Base body extension for RKE

- For extending the clamp width
- Supplied with attachment screws

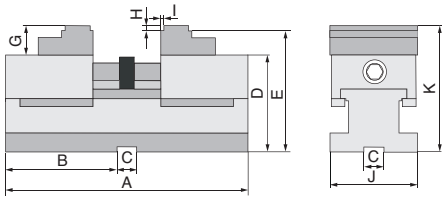
for type	Length mm	Clamping range mm	art.no.	€
RKE 125	105	218 - 432	**458201** 1125	719,–
RKE 125	200	310 - 524	458201 2125	1.165,–
RKE 125	400	514 - 728	458201 3125	1.605,–
RKE 160	190	346 - 666	458201 1160	1.165,–
RKE 160	295	449 - 769	458201 2160	1.605,–
RKE 160	530	681 - 1006	458201 3160	2.155,–

4190

fresmak ARNOLD SC mechanical centring vice

- Self-centring high-precision clamp
- Precision 0.01 mm
- Centring accuracy 0.02 mm
- Compact design with external guide

- **Supplied without key**
- **Suitable torque wrench: article no. 7026020004**



Base body without clamping jaws

A mm	B mm	C mm	D mm	E mm	G mm	H mm	I mm	J mm	K mm	Weight kg	Clamping range mm	Retention force N	Wr. width mm	art.no.	€
250	115	20H7	100	125	30	5	6	90	130	14.3	12 -245	20	12	**458652** 0090	1.045,–
350	165	20H7	103	128	30	5	7	125	133	30	14 - 342	40	16	458652 0125	1.285,–

4143

Flat jaws including support bars

- Price per 2-piece set

Width mm	Total height mm	art.no.	€
90	30	**458750** 0090	565,–
125	30	458750 0125	709,–

4143

Claw jaws for hard jaws

- Price per unit

Jaw width mm	Total height mm	Depth mm	Clamping depth mm	art.no.	€
90	30	11/14	2.5	**458755** 0090	225,–
125	30	13/16	2.5	458755 0125	259,–

4143

Clamping claws

- Price per 4-piece set

Description	for type	art.no.	€
4 x clamping claws	SC 90	**458754** 0090	74,–
4 x clamping claws	SC 125	458754 0125	74,–

4143

SC bracket

Length mm	Width mm	Total height mm	art.no.	€
250	91	90	**458753** 0090	625,–
350	126	90	458753 0125	675,–

4143

Base jaws for accessory jaws

- Price per 2-piece set

Width mm	Total height mm	art.no.	€
90	40	**458751** 0090	415,–
125	40	458751 0125	515,–

4143

Grooved jaws for base jaws

- For base jaws article no. 458751....
- Price per unit

Jaw width mm	Total height mm	Depth mm	art.no.	€
90	40	12	**458742** 0090	80,50
125	40	12	458742 0125	182,50

4143

Prism jaws for base jaws

- For base jaws article no. 458751....
- Price per unit

Jaw width mm	Total height mm	Depth mm	D min. mm	D max. mm	art.no.	€
90	40	28	13	40	**458743** 0090	170,50
125	40	28	13	40	458743 0125	198,50

4143

Grip insert jaws for base jaws

- For base jaws article no. 458751....
- Price per unit

Jaw width mm	Total height mm	Depth mm	Support surface height mm	art.no.	€
90	40	17	8	**458747** 0090	240,–
125	40	17	8	458747 0125	265,–

4143

Claw jaws for base jaws

- For base jaws article no. 458751....
- Price per unit

Jaw width mm	Total height mm	Depth mm	Support surface height mm	art.no.	€
90	40	14	2.5	**458749** 0090	224,–
125	40	16	2.5	458749 0125	255,–

4143

RÖHM RKZ-M NC compact centric clamp

- **Steel base frame**
- **All guides are hardened and ground on all sides**
- Mechanical, manually-actuated clamping system without power intensifie
- Central clamping with two mobile jaws
- Optimised for 5-axis machining
- Short, compact design
- Large clamping range
- Middle clamping accuracy: ±0.02 mm
- Precision 0.01 mm
- **Supplied with:** 1 pair of hard stepped jaws and crank

Base body with staggered top jaws

Jaw width mm	Total height mm	Total height mm	Jaw height mm	Total length mm	Clamping range mm	Groove dimensions device mm	Clamp force kN	Weight kg	art.no.	€
50	75	55	20	167	0 - 111	20 H7	10	3.5	**458300** 0050	1.175,–
70	95	70	25	219	0 - 153	20 H7	15	7	458300 0070	1.385,–
92	117	85	32	295	0 - 208	20 H7	20	18	458300 0092	2.025,–
125	145	105	40	366	0 - 269	20 H7	25	32.5	458300 0125	2.560,–

4189

Double V-block jaw

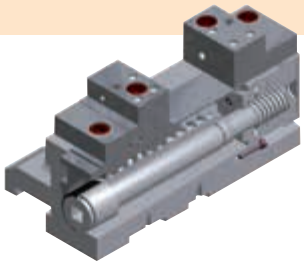
- Reversible
- Finely-stepped
- Price per set

Jaw width mm	Total height mm	Length mm	Clamp Ø mm	Clamp Ø mm	Clamp Ø 2 mm	art.no.	€
92	64.5	67	7 - 143	12 - 36	30 - 75	**458823** 0092	940,–
125	84.5	86	7 - 186	15 - 40	30 - 105	458823 0125	1.050,–

4189

ATORN® 5-axis compact clamp

- Body made from ductile iron, GJS 600
- Guideways hardened and ground
- Clamping force 40 kN at 110 Nm
- Patented quick adjustment of the clamping width
- Enclosed spindle
- Secure holding forces due to re-tensioning spring package
- Supplied without crank or torque wrench
- **Suitable torque wrench: article no. 702602 0004 (to be used without sockets)**



Base body incl. clamping claws

Length mm	Width mm	Total height mm	Clamp force kN	Weight kg	art.no.	€
250	126	100	40	23	**459500** 0125	1.448,–

4172

Stepped jaws

Jaw width mm	Description	Clamp Ø mm	art.no.	€
125	Fixed	0 - 178	**459501** 0001	235,–
125	Movable	0 - 178	459501 0002	215,–

4172

Multi-clamping jaws

- Supplied with 2 grip inserts and 2 support elements

Jaw width mm	Description	Clamp Ø mm	art.no.	€
160	Fixed	10 - 202	**459501** 0003	340,–
160	Movable	10 - 202	459501 0004	310,–

4172

Pendulum jaws

- Supplied with 2x carbide grip inserts

Jaw width mm	Clamp Ø mm	art.no.	€
156	6 - 168	**459501** 0005	216,–

4172

Screw-on jaws

- Price per PU

459501 0006

459501 0007

Jaw width mm	Description	Clamp Ø mm		art.no.	€
60	Narrow	7 - 168	2	**459501** 0006	210,–
125	Wide	77 - 240	2	459501 0007	248,–

4172

Grip bars

- Price per PU

459502 0015

459502 0035

Jaw width mm	Total height mm	Clamp Ø mm		art.no.	€
125	15	5 - 82	2	**459502** 0015	141,–
125	35	75 - 172	2	459502 0035	141,–

4172

Clip-on support bars

- Price per PU

Jaw width mm	Total height mm		art.no.	€
125	15	2	**459503** 0015	116,–
125	35	2	459503 0035	116,–

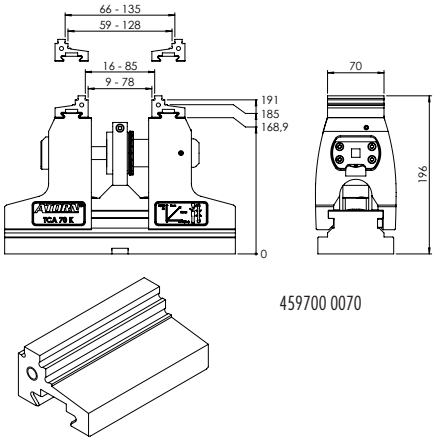
4172

ATORN® 5-axis clamping system TCA70

With central clamp for 5-sided machining. Thanks to the design and central telescopic spindles, the protruding contours remain unchanged regardless of the clamp width. Excellent accessibility of all sides is guaranteed. The series-standard quick-change jaw system reduces tooling times and increases fl xibility.

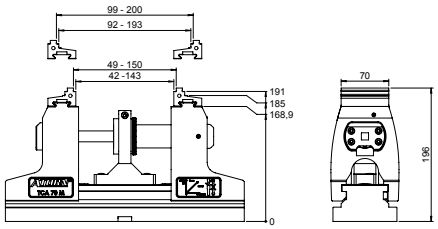
- Ideal for use on 5-axis machining centres
- Conventional clamping and grip clamping possible
- Telescopic spindle, protruding contour remains unchanged
- Central, simple programming without zero offs t
- Material allowance is distributed symmetrically
- Repetition precision 0.01 mm
- Centring accuracy 0.02 mm
- Workpiece accessibility irrespective of the clamp width
- Symmetrical design = workpiece remains central and parallel
- Workpiece support height = 192 mm
- Quick-change jaw system, tool-free jaw changing thanks to quick-release lock
- Reversible jaws: for min. / max. clamp width with one pair of jaws
- Constant clamp force thanks to low-maintenance telescopic spindle
- Supplied as standard with locating bores for zero-point clamping system, pitch 200 mm
- Work table attachment also with through-bolts / fitting sc ews
- In 50 / 63 mm grid or clamping claws
- Integrated scale ring for fine a justment of the central position
- Clamp force 30 kN at 45 Nm linear
- Operation with torque wrenches
- **Supplied with**
  1 ATORN TCA70 without jaws
  1 support plate for transportation
  1 hand crank for pre-setting
  Please order clamping jaws separately

459700 0070

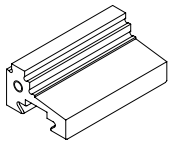


459700 0070

459700 1070



459700 1070



Length mm	Clamp force kN	Weight kg	art.no.	€
286	30	17.5	**459700** 0070	2.979,–
351	30	19.5	459700 1070	3.189,–

4172

ATORN® Accessories for 5-axis clamping system TCA70

Stepped jaws, carbide-coated

- For clamping workpieces to be machined in parallel
- Clamping surfaces (step) with additional carbide coating to guarantee secure clamping
- **Clamp width**
  Type 70K 9-135 mm
  Type 70M 42-200 mm

Jaw width mm	Weight kg	art.no.	€
38	0.3	**459701** 0038	285,–
70	0.3	459701 0070	300,–
100	0.4	459701 0100	330,–

4172

459701 0038

459701 0070

459701 0100

Grip jaws

- Minimal lost clamping edge of 4 mm
- Positive form fitting hrough the penetration of the pointed tips into the material without pre-shaping
- Integrated grip row, thus rigid vibration-resistant construction particularly in upright parts
- Additional clamping surfaces, ground on both sides
- Suitable for material strength up to 1000 N/mm²
- Price per unit
- **Clamp width**
  Type 70K 9-134 mm
  Type 70M 42-199 mm

Jaw width mm	Weight kg	art.no.	€
38	0.3	**459702** 0038	235,–
70	0.3	459702 0070	225,–
100	0.4	459702 0100	335,–

4172

459702 0038

459702 0070

459702 0100

Continued on next page >>>

V-block jaws

- For the horizontal and vertical clamping of round and flat orkpieces
- Price per unit
- **Clamp width**
  Type 70K horizontal Ø 10 mm - Ø 40 mm; vertical Ø 16 mm - Ø 80 mm
  Type 70M horizontal Ø 10 mm - Ø 40 mm; vertical Ø 47 mm - Ø 110 mm

Jaw width mm	Weight kg	art.no.	€
70	0.6	**459703** 0070	360,–

4172

Soft jaws

- Material: case-hardened steel or aluminium
- For self-assembly of special jaws
- Maximum machining depth: 15 mm
- Price per unit
- **Clamp width**
  Type 70K 0 mm - 70 mm
  Type 70M 34 mm - 135 mm

Jaw width mm	Design	Weight kg	art.no.	€
120	Steel 21MnCr5G - 1.2162	1.2	**459704** 0120	168,–
120	Aluminium AlZn5.5MgCu	0.4	459704 1120	168,–

4172

459704 1120

459704 0120

Alignment and fastening set for T-slot

- For attachment to pallet and work table with clamping claws

for T-slot mm	Thread	art.no.	€
12	M10	**459710** 1210	136,–
14	M12	459710 1412	119,–
16	M14	459710 1614	160,–
18	M16	459710 1816	125,–
22	M16	459710 2216	215,–

4172

Clamping claws

- For attaching the clamp to the work table
- Price per set = 2 pieces

for thread	art.no.	€
M12 to M16	**459711** 0001	41,–

4172

Alignment and fastening set for bottom section

- For alignment (positioning) and attachment of the clamp lower section to pallet and work table
- Price per set = 2 pieces

for T-slot mm	Thread	art.no.	€
14	M12	**459720** 1412	90,–
16	M12	459720 1612	122,–
18	M12	459720 1812	89,–

4172

Fitting screw

Ø mm	Thread	art.no.	€
12	M12	**459712** 1212	17,–

4172

Workpiece stop

Design	art.no.	€
magnetic	**459713** 0002	49,–
mechanical	459713 0001	42,–

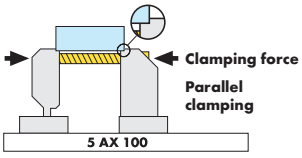
4172

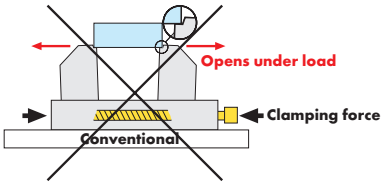
459713 0001

459713 0002

ATORN® 5AX100 and 3AX100 5-axle clamping system

- High clamping force (up to 42 kN) exactly where it is needed – due to the feed rod integrated directly below the workpiece support
- No widening of the clamping jaws under load, no distortion of the work table
- Allows maximum cutting forces due to extreme rigidity
- The low clamping depth of 8 mm enables 5-sided machining without any protruding edges
- Wide variety of clamping widths possible simply by moving the two jaws; options are limited only by the size of the work table
- Clamps raw parts, machined parts, round and irregularly shaped parts
- Positive-fit clamping wi h no knockout
- 5 AX 100 can be set up on T-slot panels and tables, perforated grid plates and dedicated fixtu es
- Jaw width 100 mm
- **Supplied complete, without fixing or top sets**





3AX for slot spacing 63 - 126 mm

model	Clamping height mm	Clamp force kN	Clamping range mm	Clamping depth mm	art.no.	€
3AX100/100	100	5 - 22	22 - 236	8	**459100** 0100	1.839,–
					4167	

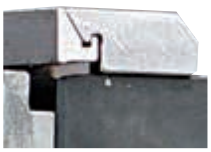
5AX for slot spacing 63 - 126 mm

model	Clamping height mm	Clamp force kN	Clamp Ø mm	Clamping depth mm	art.no.	€
5AX100/175	175	5 - 42	22 - 236	8	**459100** 0175	1.839,–
					4167	

Clamping jaws

Description		art.no.	€
Pull-down clamping jaws	1	**459008** 0003	430,–
Standard clamping jaws	1	459008 0001	205,–
Unmachined clamping jaws	2	459008 0002	195,–
		4167	

459008 0001



459008 0002

459008 0003

Fixing sets for 3AX and 5AX T-slot systems

- Price per pack

for T-slot mm	art.no.	€
14 mm , M12	**459013** 0008	112,–
18 mm , M12	459013 0009	112,–
	4167	

Extension shafts

- With union nut

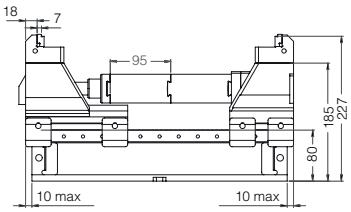
Length mm	art.no.	€
60	**459011** 0001	96,–
120	459011 0002	127,–
240	459011 0003	159,–
480	459011 0004	300,–
	4167	

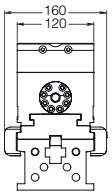
Pins

Description		art.no.	€
Cup point D4	10	**459010** 0004	8,30
Cup point D6	10	459010 0005	8,30
		4167	

ATORN® 5-axis slide rail set 120 mm

- For stable, low-vibration machining
- 40 kN clamp force at 85 Nm tightening torque
- Positive-fit j w mounting
- Coated spindle and spindle nut
- Spindle can be extended without tools
- Extendable to all required lengths
- Retooling in seconds
- Extensive range of accessories and jaws

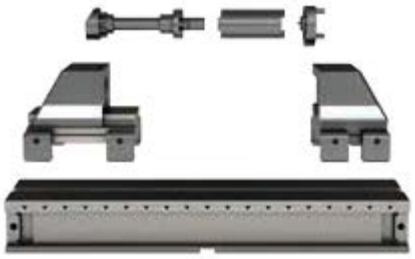




Slide rail set 120 mm, without jaws

Length mm	Width mm	Clamp Ø mm	Extensions mm	art.no.	€
300	120	0 - 270	1	**464100** 1230	1.989,–
400	120	0 - 370	2	464100 1240	2.109,–
500	120	0 - 470	3	464100 1250	2.409,–
600	120	0 - 570	4	464100 1260	2.809,–

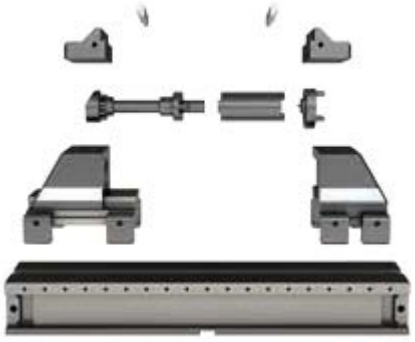
4197

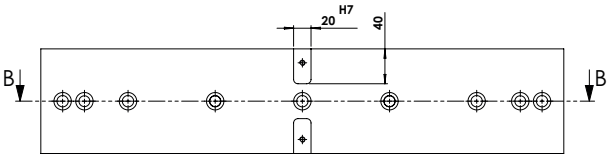


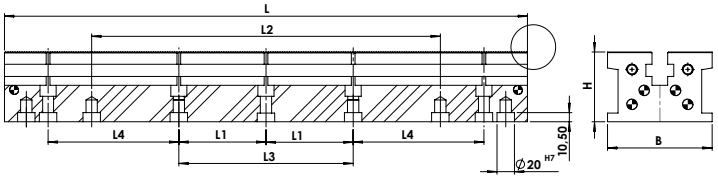
Slide rail set 120 mm, with jaws

Length mm	Width mm	Clamp Ø mm	Extensions mm	art.no.	€
300	120	0 - 270	1	**464101** 1230	2.579,–
400	120	0 - 370	2	464101 1240	2.689,–
500	120	0 - 470	3	464101 1250	2.989,–
600	120	0 - 570	4	464101 1260	3.389,–

4197







Slide rail 120 mm wide 80 mm high without body

Length mm	Width mm	Total height mm	L1 mm	L2 mm	L3 mm	L4 mm	for screws	art.no.	€
200	120	80	-	-	100	-	M16 - DIN912	**464102** 1220	679,–
300	120	80	100	-	-	-	M16 - DIN912	464102 1230	769,–
400	120	80	150	-	-	-	M16 - DIN912	464102 1240	889,–
500	120	80	200	-	-	-	M16 - DIN912	464102 1250	1.189,–
600	120	80	-	400	250	400	M16 - DIN912	464102 1260	1.449,–

4197

464103 1201

464103 1202

464103 1203

Accessories for 5-axis body

Designation	art.no.	€
5-axis body for slide rails, complete	**464103** 1201	1.299,–
Fixed base block	464103 1202	439,–
Base block clamping unit (moving jaws)	464103 1203	599,–
Spindle, complete	464103 1204	265,–
Spindle extension	464103 1205	77,50

4197

464103 1204

464103 1205

Clamping jaws for 5-axis body

• Price per unit

Designation	art.no.	€
Standard jaws 120 mm wide for clamping width 120 mm	**464104** 1201	210,–
Standard jaws 120 mm wide for clamping width 60 mm	464104 1202	225,–
Jaws 120 mm wide for clamping large workpieces	464104 1203	275,–
Standard jaws (soft) 120 mm wide for clamping width 120 mm	464104 1204	149,–
Smooth jaws, clamping width 120 mm for parallel supports, Article No. 464107 12..	464104 1205	195,–
Smooth jaws, clamping width 60 mm for parallel supports, Article No. 464107 06..	464104 1206	215,–

4197

464104 1205

464104 1203

464104 1204

464104 1202

464104 1201

464104 1206

Parallel supports, ground

• Price per unit

Length mm	Width mm	Total height mm	art.no.	€
60	8	12	**464107** 0612	45,50
60	8	17	464107 0617	45,50
60	8	25	464107 0625	45,50
60	8	30	464107 0630	45,50
60	8	35	464107 0635	45,50
60	8	44	464107 0644	39,90
120	8	12	464107 1212	48,–
120	8	17	464107 1217	48,–
120	8	25	464107 1225	48,–
120	8	30	464107 1230	48,–
120	8	35	464107 1235	48,–
120	8	44	464107 1244	42,50

4197

Pendulum jaws with accessories for 5-axis body

• Price per unit

Designation	Length mm	Width mm	Total height mm	Ø mm	art.no.	€
Base jaws set with rotary plate for Flex clamping jaws	150	90	30	-	**464105** 1501	889,–
Flex clamping jaw, smooth	-	-	-	18	464105 1502	36,20
Flex clamping jaw with claws	-	-	-	18	464105 1503	47,–
Flex clamping jaw with carbide gripper	-	-	-	18	464105 1504	52,50
Standard swivel jaws with rotary table	120	68	44.4	-	464105 1202	375,–
Swivel jaws with rotary plate for large workpieces	120	68	44.4	-	464105 1201	375,–

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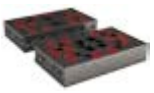
464105 1502

464105 1503

464105 1504


464105 1501

464105 1201

464105 1202

Screw-in jaws for clamping jaws

• Price per unit

Designation	art.no.	€
Soft screw-in jaws 120 mm	**464106** 0001	48,–
Soft screw-in jaws 60 mm	464106 0002	44,20
Screw-in jaws with claw and steps 3 mm and 5 mm 120 x 19 x 11	464106 0003	112,–
Screw-in jaws with claw and steps 3 mm and 5 mm 60 x 19 x 11	464106 0004	107,–
Screw-in jaws with steps 3 mm and 5 mm 120 x 19 x 11	464106 0005	97,–
Screw-in jaws with steps 3 mm and 5 mm 60 x 19 x 11	464106 0006	93,–
Combi screw-in jaws 120 mm (step 1 smooth with claws, step 2 smooth)	464106 0007	113,–
Combi screw-in jaws 60 mm (step 1 smooth with claws, step 2 smooth)	464106 0008	105,–

4197

464106 0001

464106 0002

464106 0003

464106 0004

464106 0005

464106 0006

464106 0007

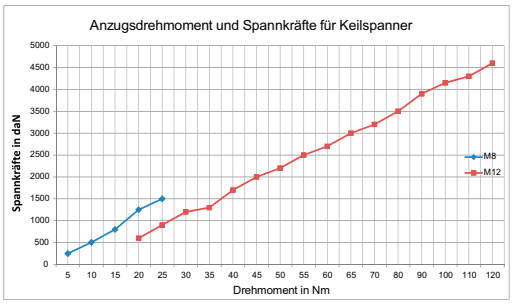
464106 0008

ATORN® Modular multi-clamping fixtu e

- Quick and precise workpiece clamping on vertical and horizontal machining centres, milling and grinding machines
- Standard clamping device for diffe ent workpieces
- Wedge clamps of various sizes can be used
- Allows diffe ent workpieces to be clamped in extremely confined paces
- Multiple slide rails combined by means of a connection system, optimum length adjustment to the work table
- **Tombstones available on request**
- **60° toothing**

Particular benefits

- Perform numerous clamping tasks with one clamping system
- Can also be used on ATORN zero-point clamping systems
- All system components are compatible
- Easy-to-install stop system
- Cost-effecti e clamping system



Multi-clamping slide rail sets

- Rail-mounted clamping elements
- Other combinations available on request

Contents per set	Dimensions	art.no.	€
1x slide rail 2x smooth fi ed jaws 1x smooth wedge clamp	200 x 50 x 80	**464001** 2050	969,–
1x slide rail 2x smooth fi ed jaws 1x smooth wedge clamp	200 x 80 x 80	464001 2080	1.119,–
1x slide rail 3x smooth fi ed jaws 2x smooth wedge clamps	300 x 50 x 80	464001 3050	1.249,–
1x slide rail 3x smooth fi ed jaws 2x smooth wedge clamps	300 x 80 x 80	464001 3080	1.529,–
1x slide rail 3x smooth fi ed jaws 2x smooth wedge clamps	400 x 50 x 80	464001 4050	1.319,–
1x slide rail 3x smooth fi ed jaws 2x smooth wedge clamps	400 x 80 x 80	464001 4080	1.589,–
1x slide rail 3x smooth fi ed jaws 2x smooth wedge clamps	500 x 50 x 80	464001 5050	1.579,–
1x slide rail 3x smooth fi ed jaws 2x smooth wedge clamps	500 x 80 x 80	464001 5080	1.729,–

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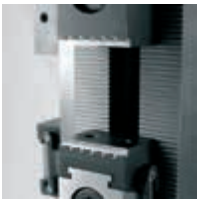

Multi-clamping slide rails, individual

L mm	B mm	H mm	Number of holes	art.no.	€
200	50	80	2	**464002** 2050	569,–
200	80	80	2	464002 2080	619,–
300	50	80	3	464002 3050	619,–
300	80	80	3	464002 3080	679,–
400	50	80	3	464002 4050	679,–
400	80	80	3	464002 4080	769,–
500	50	80	3	464002 5050	929,–
500	80	80	3	464002 5080	979,–

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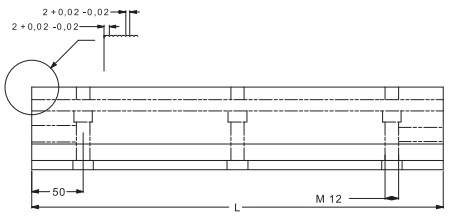
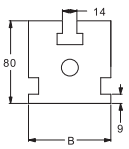
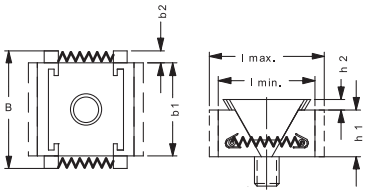






Wedge clamp

- Includes slot nut and screw
- 464008.... with allowance = approx. 4 mm per side

B mm	l min. mm	l max. mm	h1 mm	h2 mm	b1 mm	b2 mm	Screw	Clamp force kN	smooth art.no.	€	grooved art.no.	€	With allowance art.no.	€	With claws art.no.	€
30	27	31	15	5	22	4	M8	15	**464006** 3015	81,–	**464007** 3015	88,–	**464008** 3015	88,–	**464009** 3015	105,–
40	27	31	15	5	32	4	M8	15	464006 4015	96,–	464007 4015	102,–	464008 4015	102,–	464009 4015	119,–
50	27	31	15	5	42	4	M8	15	464006 5015	115,–	464007 5015	119,–	464008 5015	119,–	464009 5015	136,–
40	39	45	22	7	30	5	M12	30	464006 4022	124,–	464007 4022	132,–	464008 4022	132,–	464009 4022	147,–
50	39	45	22	7	40	5	M12	30	464006 5022	134,–	464007 5022	141,–	464008 5022	141,–	464009 5022	157,–
60	39	45	22	7	42	5	M12	30	464006 6022	153,–	464007 6022	157,–	464008 6022	157,–	464009 6022	178,–
54	48	58	29	11	50	6	M12	30	464006 5429	156,–	464007 5429	168,–	464008 5429	168,–	464009 5429	191,–
69	48	58	29	11	57	6	M12	30	464006 6929	176,–	464007 6929	183,–	464008 6929	183,–	464009 6929	210,–
84	48	58	29	11	72	6	M12	30	464006 8429	225,–	464007 8429	235,–	464008 8429	230,–	464009 8429	250,–
									4172		4172		4172		4172	

464010 0001

464010 0002

464010 0003

464010 0004

464010 0006

Accessories

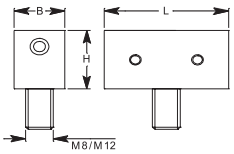
- Price per pack

Description	art.no.	€
Adapter set	**464010** 0001	67,–
2 x adjustable limit stop	464010 0002	44,30
Fixed limit stop	464010 0003	21,40
Clamping claws	464010 0004	72,50
Positioning socket 20 x 14 mm	464010 0005	23,80
Positioning bush 20 x 18 mm	464010 0006	23,80
	4172	

Fixed jaws

- Includes slot nut and screw

L mm	B mm	H mm	Screw	smooth art.no.	€	grooved art.no.	€	With claws art.no.	€
22	22	15	M8	**464003** 2215	43,50	**464004** 2215	66,–	**464005** 2215	62,–
32	22	15	M8	464003 3215	44,50	464004 3215	67,–	464005 3022	109,–
42	22	15	M8	464003 4215	46,20	464004 4215	68,–	464005 3215	63,–
30	42	22	M12	464003 3022	89,–	464004 3022	119,–	464005 4022	111,–
40	42	22	M12	464003 4022	90,–	464004 4022	122,–	464005 4215	64,–
42	42	22	M12	464003 4229	101,–	464004 4229	134,–	464005 4229	124,–
50	42	29	M12	464003 5022	91,–	464004 5022	122,–	464005 5022	113,–
57	42	29	M12	464003 5729	103,–	464004 5729	136,–	464005 5729	128,–
72	42	29	M12	464003 7229	105,–	464004 7229	140,–	464005 7229	130,–
				4172		4172		4172	



ATORN® Modular multi-clamping fixtu e 120 mm

- Extremely high basic rigidity
- Clamp force 40 kN
- Compatible with 50 mm and 80 mm slide rails
- All standard wedge clamps and jaws suitable
- Extendable to all required lengths

With smooth clamping surface

- Supplied with: 1x slide rail, 1x fi ed jaw, 1x wedge clamp with fi ed jaws

Length mm	Width mm	Total height mm	art.no.	€
200	120	80	**464108** 1220	1.079,–
300	120	80	464108 1230	1.169,–
400	120	80	464108 1240	1.279,–
500	120	80	464108 1250	1.579,–
600	120	80	464108 1260	1.829,–

4197

With 3 mm step and claw

- Supplied with: 1x slide rail, 1x fi ed jaw, 1x wedge clamp with fi ed jaws

Length mm	Width mm	Total height mm	art.no.	€
200	120	80	**464109** 1220	1.179,–
300	120	80	464109 1230	1.269,–
400	120	80	464109 1240	1.369,–
500	120	80	464109 1250	1.679,–
600	120	80	464109 1260	1.919,–

4197

Grooved design

- Supplied with: 1x slide rail, 1x fi ed jaw, 1x wedge clamp with fi ed jaws

Length mm	Width mm	Total height mm	art.no.	€
200	120	80	**464110** 1220	1.169,–
300	120	80	464110 1230	1.259,–
400	120	80	464110 1240	1.369,–
500	120	80	464110 1250	1.659,–
600	120	80	464110 1260	1.915,–

4197

Wedge clamp 120 mm

- For use with 50 mm and 80 mm slide rails, a slot nut art.no. 4640100009, a screw bushing art.no. 4640100012 and a screw M12 must be used

Type	Jaw width mm	Total height mm	H1 mm	l min. mm	l max. mm	Screw	Clamp force kN	art.no.	€
Smooth	120	54	11	59.5	46.5	M16 - DIN912	40	**464111** 1201	290,–
3 mm step and claw	120	54	11	59.5	46.5	M16 - DIN912	40	464111 1202	335,–
Smooth with carbide gripper	120	54	11	59.5	46.5	M16 - DIN912	40	464111 1203	365,–
Squared	120	54	11	59.5	46.5	M16 - DIN912	40	464111 1204	330,–

4197

464111 1201

464111 1202

464111 1203

464111 1204

Wedge clamp with fi ed jaw 120 mm

- For use with 50 mm and 80 mm slide rails, 2x slot nut art.no. 4640100009, 2x screw bushing art.no. 4640100012 and 2x screw M12 must be used

Type	Jaw width mm	Total height mm	H1 mm	l min. mm	l max. mm	Screw	Clamp force kN	art.no.	€
Smooth	120	54	8	85	97	M16 - DIN912	40	**464112** 1201	290,–
With 3 mm step and claw	120	54	6	85	97	M16 - DIN912	40	464112 1202	335,–
With carbide gripper	120	54	8	85	97	M16 - DIN912	40	464112 1203	365,–
Squared	120	54	8	85	97	M16 - DIN912	40	464112 1204	330,–

4197

464112 1204

464112 1202

464112 1203

464112 1201

Fixed jaw 120 mm

- For use with 50 mm and 80 mm slide rails, 2x slot nut art.no. 4640100009, 2x screw bushing art.no. 4640100012 and 2x screw M12 must be used

Type	Jaw width mm	Total height mm	Length mm	Screw	art.no.	€
Smooth	120	54	72	M16 - DIN912	**464113** 1201	163,–
With 3 mm step and claw	120	54	72	M16 - DIN912	464113 1202	181,–
With carbide gripper	120	54	72	M16 - DIN912	464113 1203	190,–
Squared	120	54	72	M16 - DIN912	464113 1204	185,–

4197

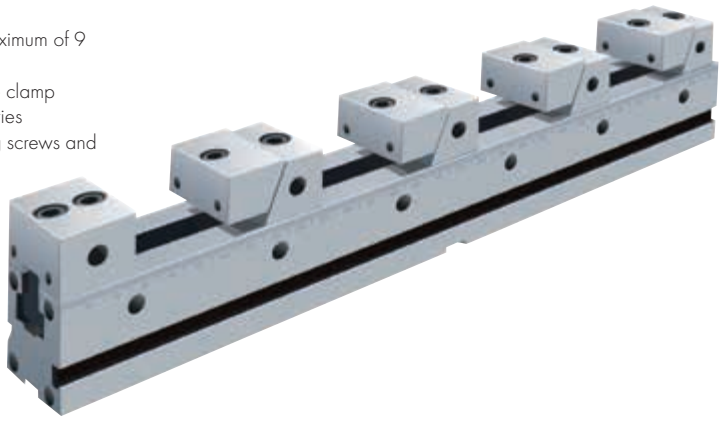
Accessories for clamping rail 120 mm

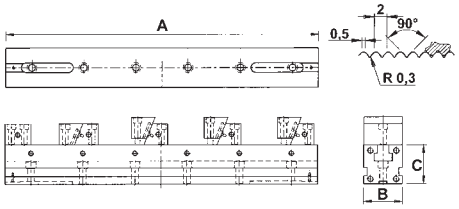
Designation	art.no.	€
Clamping claw set 40 mm for screws M16 (1 PK = 4 pcs.)	**464010** 0007	71,50
Slot nut, short M8	464010 0008	6,15
Slot nut, short M12	464010 0009	6,15
Slot nut, long M8	464010 0010	6,50
Slot nut, long M12	464010 0011	6,50
Screw bushing reduction from M16 to M12	464010 0012	10,15
Adapter set for slide rails extension	464010 0013	150,–

4197

SARA® Modular multi-clamping fixtu e

- Mechanical clamping fixtu e with a modular design
- Accuracy: within 0.02 mm
- Base body made from hardened steel, 60 HRc
- Fully equipped for clamping four workpieces; can be optionally extended to a maximum of 9 clamping positions (see table below)
- Clamping jaws are 1 mm narrower than the base body, allowing lateral use of the clamp
- Also available with stepped jaws on request; prismatic jaws available as accessories
- **Supplied with** four tool stops, clamping claws, slot nuts, alignment blocks, lifting screws and a chuck key, one fi ed jaw and four intermediate jaws





Slide rail, width 50 mm

A mm	B mm	C mm	art.no.	€
300	50	50	**460250** 0300	1.009,–
400	50	50	460250 0400	1.089,–
500	50	50	460250 0500	1.189,–
600	50	50	460250 0600	1.299,–

4148

Slide rail, width 75 mm

A mm	B mm	C mm	art.no.	€
400	75	75	**460275** 0400	1.309,–
500	75	75	460275 0500	1.409,–
700	75	75	460275 0700	1.629,–

4148

Continued on next page >>>

Movable jaw - grooved

Width mm	Length mm	Total height mm	art.no.	€
49	54/58	25	**460282** 0050	130,–
74	70/75	40	460282 0075	151,–

4148

Fixed jaw

Width mm	Length mm	Total height mm	art.no.	€
49	38	25	**460281** 0050	76,50
74	50	40	460281 0075	90,–

4148

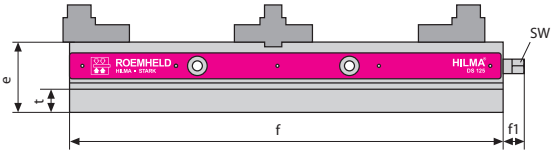
Movable jaw - smooth

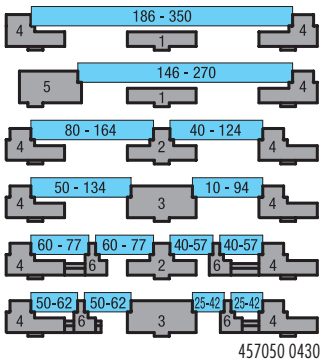
Width mm	Length mm	Total height mm	art.no.	€
49	54/58	25	**460280** 0050	128,–
74	70/75	40	460280 0075	146,–

4148

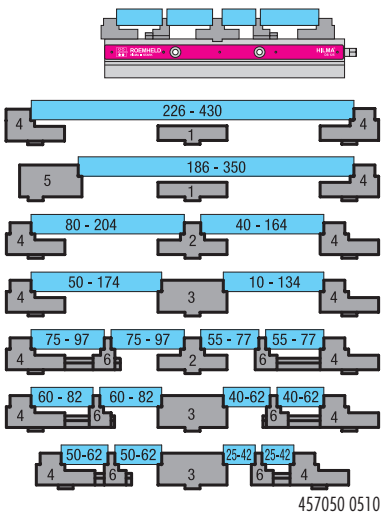
ROEMHELD HILMA ▪ STARK Double clamping system DS

- **Type DS, mechanically operated**
- **Efficient and c t-effecti e**
- Clamps multiple workpieces of the same or diffe ent sizes
- 3rd hand function
- Fully enclosed spindle chamber
- Zero-play linear guide guarantees the utmost precision
- Can be mounted on the work table using slides
- Clamping force can be preselected using a torque wrench (optional)
- Tool and mould making, manufacturing and mass production
- **Supplied without jaws or crank**
- **Caution: Spindle cannot be used without mounted jaws!**





457050 0430



457050 0510

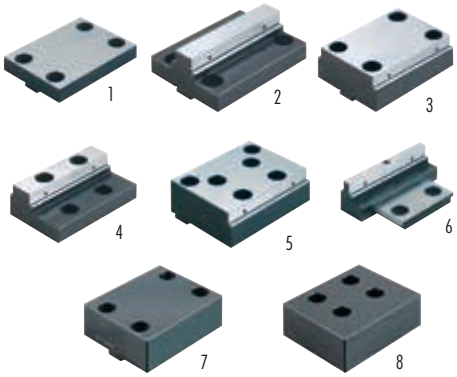
Jaw width mm	Clamp force kN	Lift mm	e mm	f mm	f1 mm	Wr. width mm	t mm	art.no.	€
125	40	44	82	430	25	17	27	**457050** 0430	2.329,–
125	40	44	82	510	25	17	27	457050 0510	2.767,–

4146

Clamping jaws

Description	Illustration	Jaw width 125 mm art.no.	€
Guide plate	1	**457062** 0010	193,–
Stepped centre jaw	2	457062 0020	199,–
Stepped centre jaw	3	457062 0030	196,–
Stepped indexable jaw	4	457062 0040	194,–
Stepped jaw, fi ed	5	457062 0050	227,–
Floating jaw for multi-clamping (total length 430 mm)	6	457062 0060	401,–
Floating jaw for multi-clamping (total length 510 mm)	6	457062 0061	403,–
Centre jaw, soft, material C45	7	457062 0070	138,–
Indexable jaw, soft, material C45	8	457062 0080	119,–

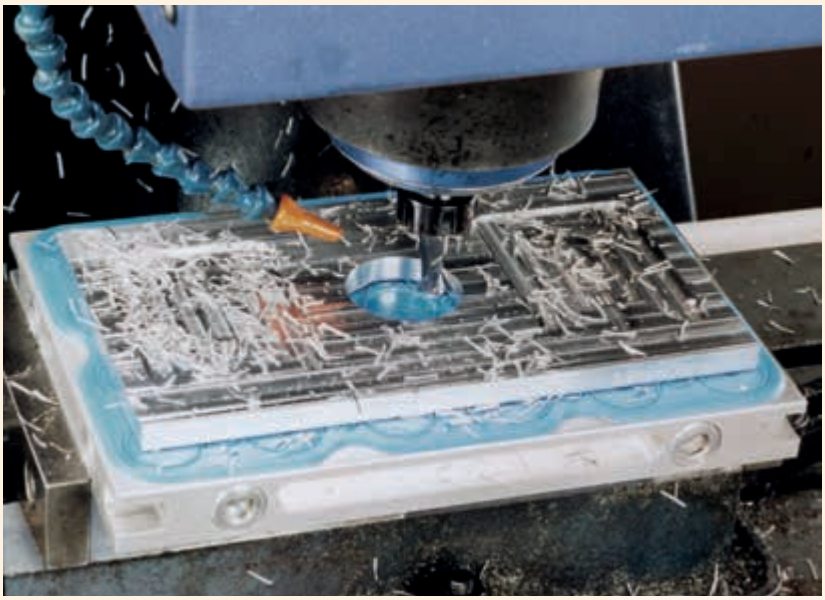
4146



INFO

Clamping with a vacuum

Innovative ATORN vacuum clamping technology



When the focus lies on tooling time and safety

Vacuum clamping technology is particularly suitable for minimized setup time and process-safe clamping of flat workpieces with level undersides that are to be clamped and machined non-destructively.
For this we offer innovative and sophisticated solutions with many accessories – for optimum and individual clamping.
When it comes to precision and you want to handle workpieces made of aluminium, non-ferrous metals, graphite, plastics, glass, wood, ceramic, titanium and steel, the ATORN clamping plate sets lay down an excellent foundation for the work. These sets allow firm and precise clamping of your workpieces, delivering in turn good results from milling or drilling.
Vacuum systems hold the workpiece fast through suction and provide an excellent grip. Using a Venturi tube or a vacuum pump has proven very useful here.

Why you will achieve more with the ATORN vacuum clamping technology

One set, two options. This is what makes the new ATORN vacuum clamping system stand out.
The new low-cost entry into the vacuum clamping technology for short-term wins out through its use of the Venturi principle. The vacuum is created through a direct connection to the compressed air supply without a vacuum pump unit. For energy-saving continuous use in series production, a vacuum pump unit is advisable.
You can clamp indirectly by means of sandwich adapter mats or directly on a grid plate. The use of adapter plates or rubber adapter mats offers two important advantages:

- Producing break-outs in the workpiece machining
- Marked reduction of the clamping times, since, in comparison with fastening directly to the grid plate, no packing cords are needed

Variants:

- ATORN slot plate for clamping micro-components and workpieces with the most widely varied contours
- ATORN grid plates for clamping simple workpieces for heavy machining
- ATORN adapter mats for workpieces with and without break-outs

ATORN® Vacuum clamping technology

Slotted vacuum plate sets with Venturi nozzles

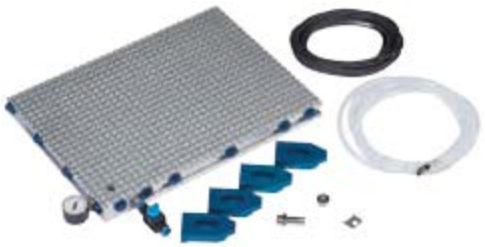
- **High process reliability with slotted vacuum plates**
- Low-maintenance Venturi technology (vacuum generated by the narrowed cross-section inside the Venturi hose)
- High process reliability when used in machining centres and other machine tools
- Noise level just 57 dB(A)
- High max. vacuum at approx. 5 - 6 bar
- Up to 93% residual vacuum depending on usage conditions; air consumption approx. 90 l/min
- **Each set comprises:**

  1x slotted vacuum plate, slot width 1 mm, centre spacing 5 mm, incl. Venturi nozzle and manometer
  4x clamping claws with slit width 14 mm
  Stop discs (height-adjustable, eccentric bearing)
  1x compressed air hose 8/6 (L = 2 m)
  1x rubber adapter mat, brown
  1x rubber adapter mat, black
  1x vacuum hose, 10/6 (L = 0.5 m)
  1x shut-off alve
  1x plug-in connector, NW 7.2

Type	Dimensions L x W x H mm	art.no.	€
SV1	300x200x32.5	**475080** 3020	1.489,–
SV2	400x300x32.5	475080 4030	2.719,–
SV3	600x400x32.5	475080 6040	3.269,–

4182

Grid vacuum plate sets with Venturi nozzles



- **Can be extended with conventional vacuum pumps, making it suitable for wet machining**
- For workpieces with simple geometric shapes
- Good seal: also suitable for rough (e.g. sawn) surfaces
- High holding forces
- Minor irregularities and concavities are sealed and compensated by fl xible sealing cords
- **Each set comprises:**
- 1x vacuum grid plate with 12.5 mm pattern, incl. integrated Venturi nozzle
- Height-adjustable stop discs
- 4x clamping claws with slot width = 14 mm
- 3 m plastic hose with hose connection and quick-action coupling
- 10 m vacuum sealing cord, Ø 4 mm black
- Incl. silencer and shut-off alve
- 1x hose connection for conventional vacuum pumps

Type	Dimensions L x W x H mm	art.no.	€
RV1	300x200x32.5	**475081** 3020	1.259,–
RV2	400x300x32.5	475081 4030	2.119,–
RV3	600x400x32.5	475081 6040	2.659,–

4182

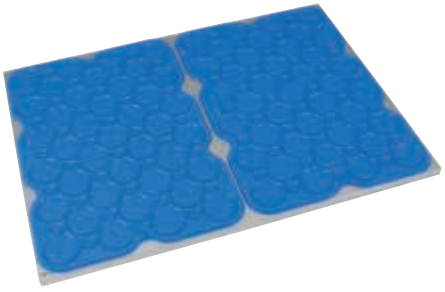
Slotted vacuum plates

- For clamping workpieces on adapter mats and rubber holding mats
- For machining complicated workpiece shapes
- Very small workpieces can be clamped
- Workpiece positioning by height-adjustable eccentric stops
- **Supplied with** vacuum hose connector piece, connection element, assembly tool, aluminium clamping claws, rubber adapter mat (brown), 1 m vacuum hose with wire helix and quick-coupling plug

Type	Dimensions L x W x H mm	art.no.	€
MS1	300x200x48	**475089** 2030	1.379,–
MS2	400x300x48	475089 3040	1.739,–
MS3	600x400x48	475089 4060	2.970,–

4182

Adapter plates for slotted vacuum plates



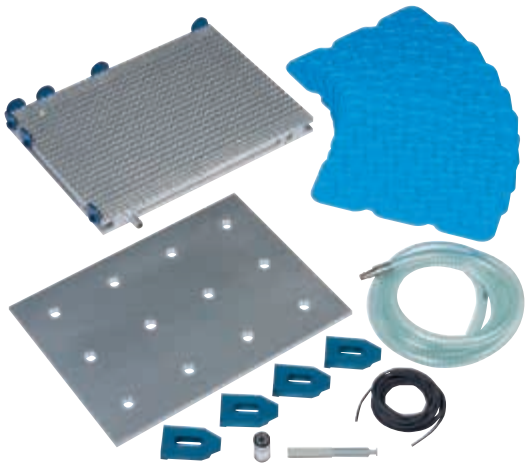
- For adapter mats with Article No. 475085....
- **Supplied with** 10x adapter mat (blue), 2 m sealing cord

Designation	Dimensions L x W x H mm	art.no.	€
for MS1	300x200x10	**475090** 2030	365,–
for MS2	400x300x10	475090 3040	559,–
for MS3	600x400x10	475090 4060	749,–

4182

Vacuum clamping system with adapter mats

- **For wet and dry machining, with vacuum pump, no Venturi nozzle**
- **For workpieces with openings**
  Construction with sealing cord, aluminium adapter plate and adapter mats
- **For workpieces without openings**
  Construction with sealing cord only, directly on the grid plate
- The modular construction allows multiple vacuum plates to be connected with overlapping grids. The operating vacuum is supplied to the individual plates via the connection elements.
- **Each set comprises:**
  1x modular grid plate with 12.5 mm grid
  1x aluminium adapter plate with 12.5 mm grid
  Set VM1: 10 blue adapter mats
  Set VM2: 9 blue adapter mats, 1 black
  Set VM3: 8 blue adapter mats, 2 black
  4x clamping claws with slot width = 14 mm
  1x assembly tool for replacing blind plugs
  3 m vacuum hose with wire helix
  10 m vacuum sealing cord, Ø 4 mm, black



Type	Dimensions L x W x H mm	art.no.	€
VM1	300x200x32.5	**475083** 3021	1.289,–
VM2	400x300x32.5	475083 4031	2.249,–
VM3	600x400x32.5	475083 6041	2.879,–

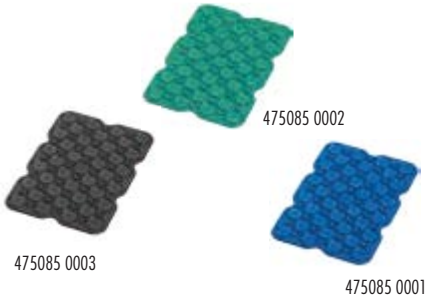
4182

Adapter mats

- For vacuum clamping systems with adapter mats

Designation	Dimensions L x W x H mm	Colour	art.no.	€
For workpieces up to 25 kg	300x200x2.5	Blue	**475085** 0001	8,–
For workpieces over 25 kg	300x200x2.5	Green	475085 0002	8,–
For leak-free coverage	300x200x2.5	Black	475085 0003	8,–

4182

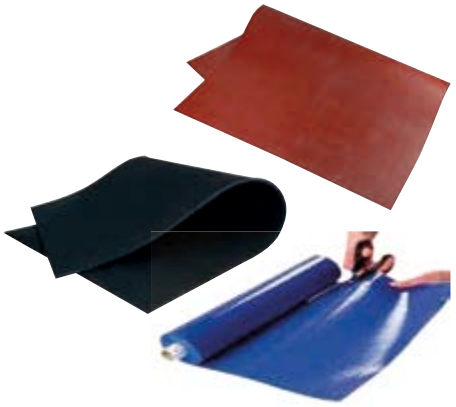


Rubber fixing mat

- For slotted vacuum plates with and without Venturi nozzles
- Material may be removed during milling
- Black mats suitable for plane milling
- Blue mat for use with slotted vacuum plates

Designation	Dimensions L x W x H mm	Colour	art.no.	€
Standard	300x200x3	Brown	**475086** 0001	16,50
Standard	400x300x3	Brown	475086 0006	18,90
Standard	600x400x3	Brown	475086 0004	39,–
Millable	300x200x3	Black	475086 0002	16,50
Millable	400x300x3	Black	475086 0003	29,–
Millable	600x400x3	Black	475086 0005	39,–
Thin version	2000x400x1	Blue	475086 1001	97,–

4182



Accessories

- For vacuum clamping systems with adapter mats

Designation	Length m	art.no.	€
Sealing cord	50	**475084** 0001	76,–
Vacuum suction hose with wire helix	10	475084 0002	54,–

4182

Vacuum pumps

- Defoamer Art.-No. 742036 0001 is recommended for the liquid ring vacuum pump

Designation	Absorption capacity l/min	Dimensions	Noise level dB	Clamping surface	Weight kg	Nominal output	art.no.	€
Modular vacuum pump unit	16 m³/h	Ø 320 x 690	60	< 0.5 m²	31	400 V / 0.55 kW	**475087** 0002	2.999,–
Liquid ring vacuum pump	25 m³/h	463 x 432 x 602	50	< 1 m²	38	400 V / 0.88 kW	475087 0003	3.429,–
Modular vacuum pump unit	21 m³/h	Ø 320 x 690	62	< 1 m²	34	400 V / 0.75 kW	475087 0005	3.599,–

4182

Technology to get excited

The new ATORN zero-point clamping system fares well in any comparison

Experience the ATORN zero-point clamping system, which presents the advantages of its innovative and trend-setting characteristics in use.

Advantages that lift the ATORN zero-point clamping system well above the competition

- **Use of diffe ent clamping fittings or maximum positioning precision:**
  - Zero-point fitting Positions at the absolute zero reference point
  - Strut fitting Fixes the remaining free axis in place
  - Undersize fitting Is used exclusively for clamping and restraint
- **Two ways of setting diffe ent zero points**
  - Classic: The zero point is define via the zero point fittin in combination with the strut fittin
  - Based on temperature effects The zero point is define via the centre axis by solely using strut fitting
- **System requires no maintenance**
  - Completely sealed system made of stainless steel to eliminate the need to maintenance when working
- **Advantages in use**
  - Absolute simplicity in use thanks to the large catchment tolerance and the non-jamming feed-in facility
- **Process safety thanks to advanced technology**
  - The characteristics of the ‚three-cycle principle, form fi and a large ball diameter' further enhance the process safety. These characteristics optimally distribute the force, losing no effec in the process

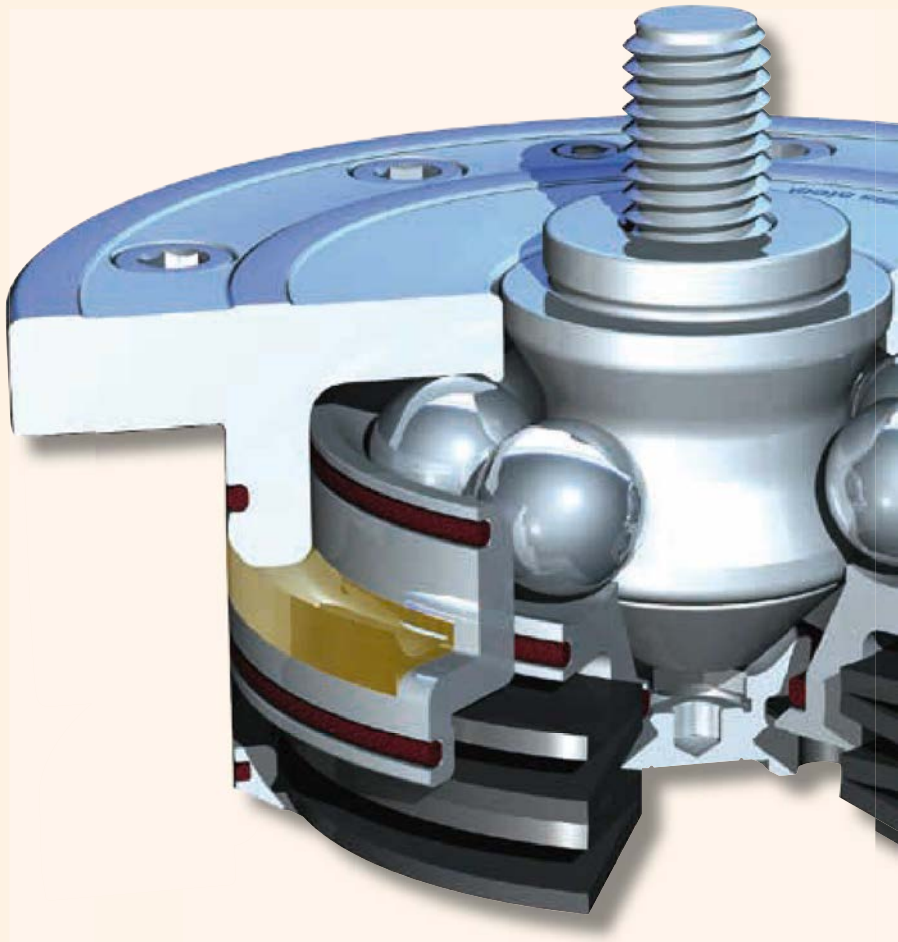
Advantages in use

Large catchment tolerance

For the purpose of retracting a pallet into the clamping module, a pre-positioning of 6.5 mm or 12 mm is suÿcient.

Non-jamming

Non-jamming extension and retraction thanks to the ideal form of the clamp fitting



Advantages in the technology

Large retention, catchment and sealing forces

Size	Retention force (kN)	FCatchment/sealing force (kN)
		hydr.
K 10.2	25	10
K 20	55	20

Three-cycle principle

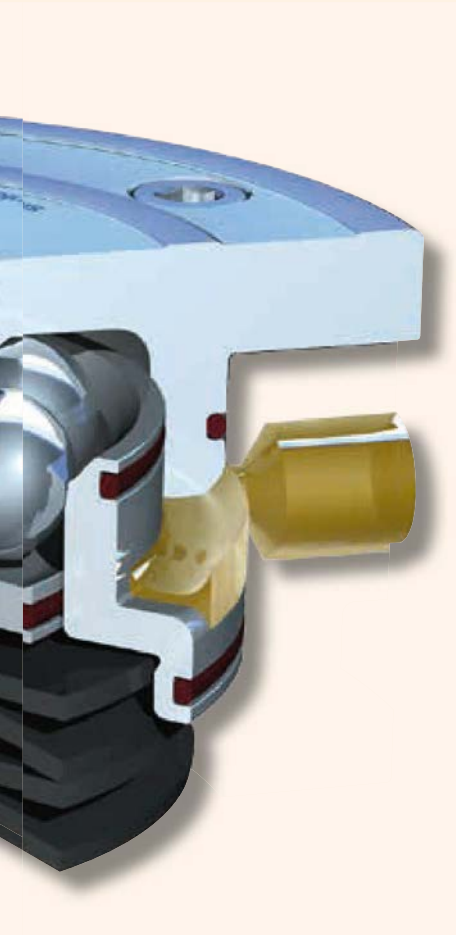
Force is distributed by way of a three-cycle principle. This avoids exert shear loads on the balls.

Form fit

The balls are encompassed from three sides in a form-fit fashion. The forces are exerted evenly over the balls and are optimally spread out.

Large ball diameter

Better distribution of forces thanks to larger ball diameter.

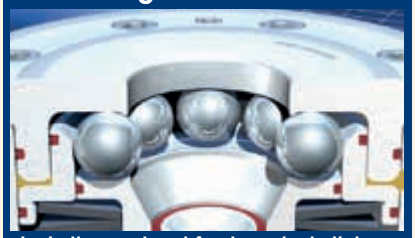


Advantages in maintenance

Rust-free – Robust – Suitable for industrial use

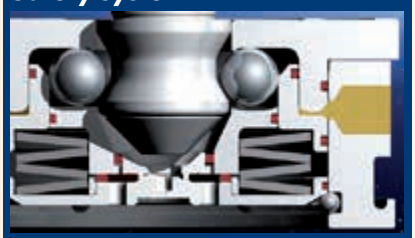
High-alloy, hardened tool steel. – This prevents corrosion. Robust, suitable for industrial use and with a long service life.

No ball cage



The balls are placed freely in the ball duct and continuously reposition themselves. As the balls are not in a cage, it is a quite simple process to blow out dirt using air.

Safety system

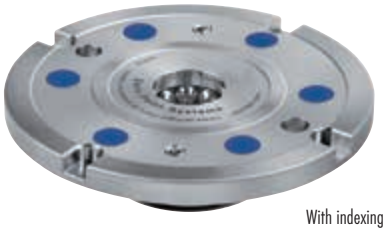


The system is absolutely process-safe. The clamping module can be opened at any time.

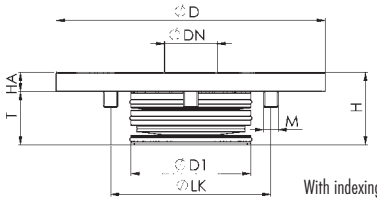
ATORN® K10.2 and K20 installation clamping modules

- Hydraulic unlocking
- Hardened cover and piston
- Precision < 0.005 mm
- **Use:** Zero-point clamping system for optimised tooling times when clamping; for all areas of chip-forming and chip-free machining as well as the food, pharmaceutical and chemical industries.
- **Note:** Installation clamping modules boast high holding, pull-in and locking forces despite their extremely small dimensions. Hydraulic pressure is only required for releasing (min. 50 bar / max. 60 bar). The modules are mechanically locked when clamped. The advantage to this is the lack of inconvenient lines and of any risk of leaks.
- Available on request:
  - Installation drawings
  - Automation solutions
  - Also available as an individual flan e version

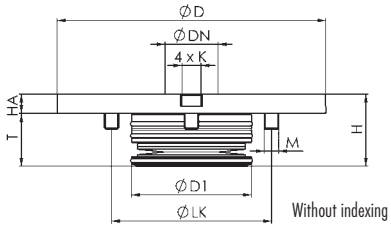
Without indexing



With indexing



With indexing



Without indexing

K10.2 with and without indexing

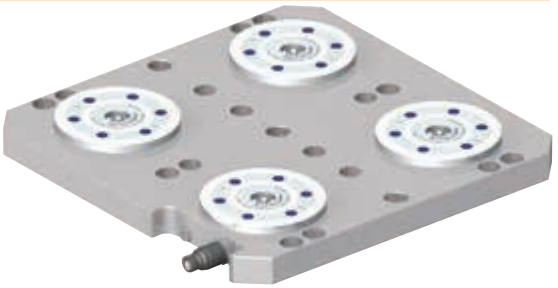
model	Retention force N	Entrance/sealing force kN	D mm	DN mm	D1 mm	H mm	HA mm	LK mm	M mm	K mm	T mm	Weight kg	art.no.	€
Without indexing	25	10	112	22	50	30	8	77	M6	-	22	0.6	**459051** 1010	466,–
With indexing	25	10	112	22	50	30	8	77	M6	8	22	0.6	459051 2010	579,–
													4195	

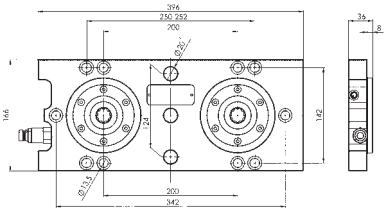
K20 with and without indexing

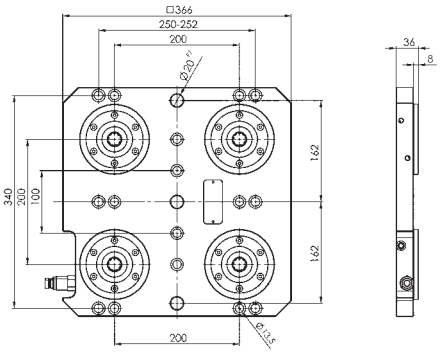
model	Retention force N	Entrance/sealing force kN	D mm	DN mm	D1 mm	H mm	HA mm	LK mm	M mm	K mm	T mm	Weight kg	art.no.	€
Without indexing	55	20	112	32	78	44	10	88	M6	-	34	1.4	**459051** 0020	795,–
With indexing	55	20	112	32	78	44	10	88	M6	8	34	1.4	459051 1020	865,–
													4195	

ATORN® K10.2 multi-clamping stations

- Hydraulic unlocking
- Precision < 0.005 mm
- Steel, unhardened
- The clamping systems are pre-equipped with attachment holes (for common table slot sizes 63, 100 and 125 mm) and positioning aids. The clamping stations are ready for immediate operation. Connections are pre-screwed.
- The clamping station with blow-out has 2 connections: 1 x hydr. opening, 1 x pneum. blow-out
- Installation drawings, further sizes and customised clamping stations for your machine are available on request.
- **Advantage:**
- Low overall height of just 36 mm







Double clamping station

- For common table slot sizes 63, 100 and 125 mm

Entrance/sealing force kN	Retention force N	Weight kg	art.no.	€
2 x 10	2 x 25	14	**459071** 1002	1.899,–
			4195	

4-place clamping station

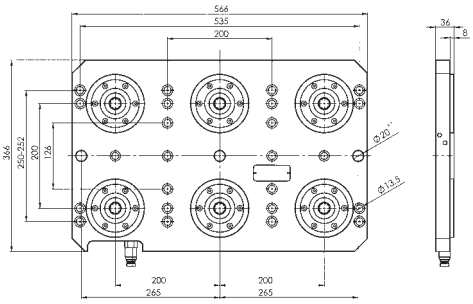
- For common table slot sizes 63, 100 and 125 mm

Entrance/sealing force kN	Retention force N	Weight kg	art.no.	€
4 x 10	4 x 25	30	**459073** 1002	3.349,–
			4195	

6-place clamping station

- For common table slot sizes 63, 100 and 125 mm

Entrance/sealing force kN	Retention force N	Weight kg	art.no.	€
6 x 10	6 x 25	46	**459075** 1002	4.749,–
			4195	



ATORN® K20 multi-clamping stations

- Hydraulic unlocking
- Precision < 0.005 mm
- Steel, unhardened
- Attachment holes in the base plate can be provided to your specifications on request.
- The clamping station has 1 connection: 1 x hydr. opening
- Installation drawings, further sizes as well as customised clamping stations for your machine available on request.
- **Benefi :** Low overall height of just 46 mm

Double clamping station

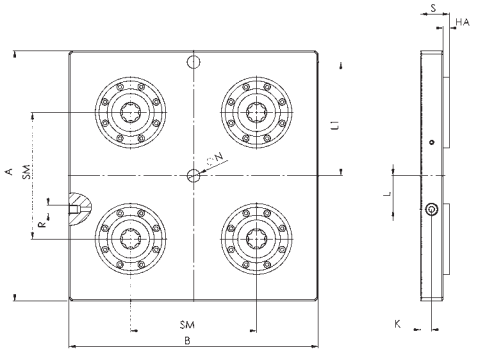
Entrance/sealing force kN	Retention force N	A mm	B mm	HA mm	K mm	L mm	L1 mm	N mm	R mm	S mm	SM mm	Weight kg	art.no.	€
2 x 20	2 x 55	196	396	10	19	45	180	20	G1/4	46	200	21.9	**459071** 2002	2.880,–
													4195	

4-place clamping station

Entrance/sealing force kN	Retention force N	A mm	B mm	HA mm	K mm	L mm	L1 mm	N mm	R mm	S mm	SM mm	Weight kg	art.no.	€
4 x 20	4 x 55	396	396	10	19	50	180	20	G1/4	46	200	44	**459073** 2002	4.249,–
													4195	

6-place clamping station

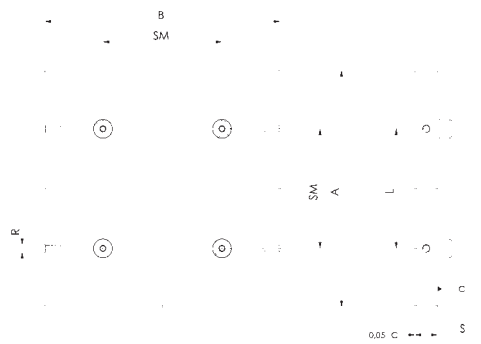
Entrance/sealing force kN	Retention force N	A mm	B mm	HA mm	K mm	L mm	L1 mm	N mm	R mm	S mm	SM mm	Weight kg	art.no.	€
6 x 20	6 x 55	396	596	10	20	50	200	20	G1/4	46	200	75	**459075** 2002	7.879,–
													4195	



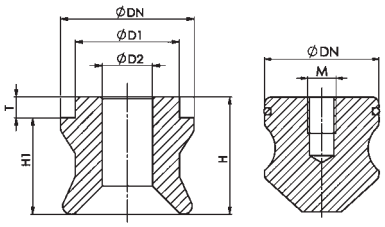
ATORN® Interchangeable pallets for K10.2 and K20

- High-strength aluminium
- Including clamping nipple and catch screw
- **Note:** attachment holes can be provided in interchangeable pallets on request.
- Other dimensions, pitch variation and clamping nipple quantities are available on request.

for clamping station	A mm	B mm	L mm	R	S mm	SM mm	Weight kg	art.no.	€
K10.2 / 2-place	166	396	90	M12	30	200	6	**459070** 1002	449,–
K10.2 / 4-place	366	366	200	M12	30	200	10	459070 1004	689,–
K10.2 / 6-place	366	566	200	M12	30	200	16	459070 1006	939,–
K20 / 2-place	196	396	120	M12	40	200	6	459070 2002	449,–
K20 / 4-place	396	396	200	M12	40	200	16	459070 2004	759,–
K20 / 6-place	396	596	200	M12	40	200	25	459070 2006	1.055,–
								4195	



ATORN® Clamping fittings and ca ch screws



Clamping fittin

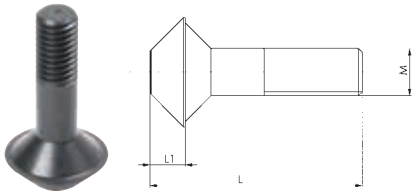
- Hardened, for hydraulic clamping modules

Type	DN mm	D1 mm	D2 mm	H mm	H1 mm	M mm	T mm	art.no.	€
Zero-point fitting K10.	22.0	15	8	19	16	-	3	**459061** 1001	40,80
Strut fitting K10.	22.0	15	8	19	16	-	3	459061 1002	40,80
Undersize fitting K10.	21.8	15	8	19	16	-	3	459061 1003	40,80
Protective fitting K10.	21.8	-	-	-	-	M8	-	459061 1004	40,80
Zero-point fitting K2	32.0	25	12	28	23	-	5	459061 2001	78,–
Strut fitting K2	32.0	25	12	28	23	-	5	459061 2002	78,–
Undersize fitting K2	31.8	25	12	28	23	-	5	459061 2003	78,–
Protective fitting K2	31.8	-	-	-	-	M8	-	459061 2004	78,–

4167

Catch screws

- Strength class 12.9
- Versions in other lengths and materials (e.g. stainless steel) available on request



for type	M mm	L mm	L1 mm	art.no.	€
K10,2	M8	37	6	**459062** 1001	15,30
K20	M12	54	9	459062 2001	17,80

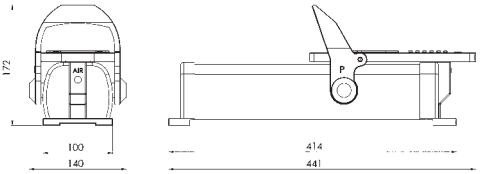
4167

ATORN® Air hydraulic pump and connection set

- For opening hydraulic clamping modules or clamping stations.
- Compact, pneumatically operated hydraulic pump for single-acting circuits
- Integrated safety valve for regulating the hydraulic output pressure (factory-set to a maximum operating pressure of 60 bar)
- The expansion body in the oil tank enables the pump to be used horizontally and vertically.
- Connecting thread, air: G1/4
- Connecting thread, oil: G1/4
- **Note**: the pump is filled wi h a standard commercial hydraulic oil (HLP32) ready for use

1. Air intake,
2. Hydraulic outlet

Air hydraulic pump



Air pressure min. bar	Air pressure max. bar	Usable oil vol. cm³	Transport vol. max. cm³/min	Weight kg	art.no.	€
4	6	1000	750	5.9	**459078** 0001	675,–

4195

Connection set

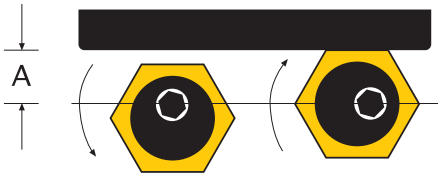
- For connecting the clamping station and air hydraulic pump

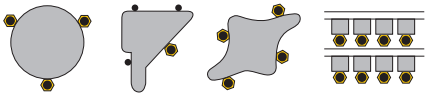
Description	art.no.	€
Connection set incl. manometer	**459078** 0007	179,–

4195

Eccentric clamps

- For fixtu e plates
- Eccentric head causes the clamping motion and clamping force (up to 27 kN)
- The hexagonal brass washer acts as a clamp
- Any workpiece shape can be clamped with positioning pins and one or two clamping screws
- Low height allows workpiece surfaces to be machined easily
- No need to consider the position of clamping claws in CNC programming
- Space-saving multi-clamping due to low height





It is easy and cost-effecti e to clamp parts of all shapes:

Eccentric anchor clamps

Clamp force kN	Interior hexagon mm	Thread	Thread length mm	Wr. width mm	Wr. width height mm	Eccentric travel mm	Contents	art.no.	€
0.9	3	M4	10	8	2.8	0.8	10 units	**475001** 0003	60,50
3.4	4	M6	12	16	4.8	1.3	10 units	475001 0004	65,50
3.6	5	M8	16	20	4.8	1	12 units	475001 0005	81,–
3.63	5	M8/V2A	16	20	6.4	1	4 units	475001 0015	103,–
9	7	M10	20	20	6.4	1.6	10 units	475001 0007	73,50
18	8	M12	25	25	9.5	2	8 units	475001 0008	81,–
27	12	M16	30	30	12.7	2.5	4 units	475001 0012	61,–

4156

Spare hexagonal washers

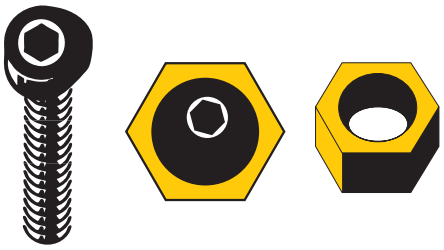
Thread	Contents	art.no.	€
M4	10 units	**475005** 0004	35,10
M6	10 units	475005 0006	37,40
M8 V2A	8 units	475005 0080	77,50
M8	8 units	475005 0008	31,60
M10	4 units	475005 0010	16,60
M12	4 units	475005 0012	22,–
M16	4 units	475005 0016	29,10

4156

Spare screws

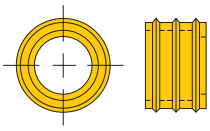
Thread	Contents	art.no.	€
M4	10 units	**475003** 0004	50,50
M6	10 units	475003 0006	55,–
M8 V2A	8 units	475003 0080	153,–
M8	8 units	475003 0008	44,40
M10	4 units	475003 0010	22,90
M12	4 units	475003 0012	31,60
M16	4 units	475003 0016	53,–

4156



Fastening disc

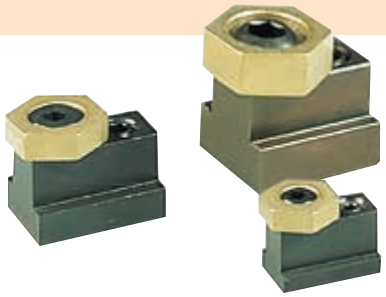
- Suitable for clamping raw and cast parts as well as untreated surfaces
- Made from case-hardened steel
- Each pack contains fastening discs and eccentric screws



Clamp force kN	Interior hexagon mm	Thread	Thread length mm	Total height mm	Ø mm	Contents	Eccentric travel mm	art.no.	€
9	7	M10	20	6.4	20.6	8 units	1.6	**475007** 0010	184,–
18	8	M12	22.5	9.6	25.4	8 units	2	475007 0012	159,–
27	12	M16	26.8	12.7	30.1	4 units	2.5	475007 0016	104,–

4156

Eccentric clamping screws



- **For T-slots**
- Connecting the normal clamping elements to slot nuts using eccentric screws (with brass hexagonal washers or fastening discs) allows workpieces to be clamped cost-effecti ely on work tables or clamping plates with T-slots.
- A screw secures the T-slot nut in the T-slot
- Low height; surfaces of flat pa ts can also be machined
- Rapid adjustment to various workpiece sizes and parts of any shape, no rectangular lateral surfaces required
- Clamping force up to 27 kN
- Supplied with brass washer and slot nut

Clamp force kN	Interior hexagon mm	Thread	Thread length mm	Wr. width mm	Wr. width height mm	Eccentric travel mm	for T-slot mm	Contents	art.no.	€
3.4	4	M 6	12	16	4.8	1	8	2 units	**475012** 0408	56,–
3.4	4	M 6	12	16	4.8	1	10	2 units	475012 0410	57,50
3.6	5	M 8	16	21	4.8	1	12	2 units	475012 0512	59,50
9	7	M10	20	21	6.4	1.6	14	2 units	475012 0714	60,–
18	8	M12	25	25	9.5	2	16	2 units	475012 0816	61,50
18	8	M12	25	25	9.5	2	18	2 units	475012 0818	64,50
27	12	M16	30	30	12.7	2.5	20	2 units	475012 1220	64,50
27	12	M16	30	30	12.7	2.5	22	2 units	475012 1222	113,–

4156

Set

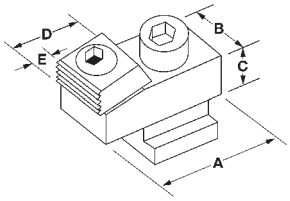
- 6 x eccentric clamping screws (with brass washers)
- 4 x slot nuts
- 2x hex keys

T-slot size mm	art.no.	€
8	**475014** 0008	133,–
10	475014 0010	134,–
12	475014 0012	134,–
14	475014 0014	138,–
16	475014 0016	143,–
18	475014 0018	151,–
20	475014 0020	210,–
22	475014 0022	280,–

4156

Pull-down clamping claw

- Pull-down effec
- For 14 mm, 16 mm and 18 mm T-slots, and for mounting directly on the fixtu e plate or work table
- M12 eccentric clamping screw for clamping force of 18 kN
- Body and clamping washer case-hardened
- Clamping washer with toothed edge for raw parts and smooth edge for machined parts
- The clamping washer adapts to the angular position of the workpiece, i.e. the workpiece does not have to be rectangular

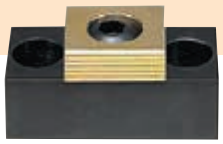


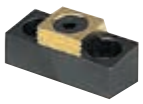
A mm	B mm	C mm	C front side mm	D mm	Eccentric travel mm	T-slot size mm	art.no.	€
50	28.5	16	12.7	25.5	2	14	**475050** 0014	73,–
50	28.5	16	12.7	25.5	2	16	475050 0016	73,–
50	28.5	16	12.7	25.5	2	18	475050 0018	79,50
50	28.5	16	12.7	25.5	2	Without T-slot nut	475050 0000	63,50

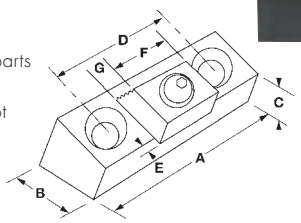
4156

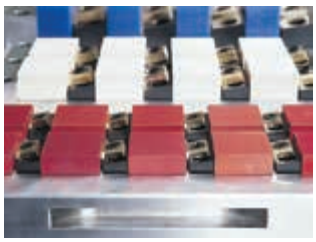
Combination pull-down claw

- The pull-down effect ensu es that the workpiece is secured to the support
- The front side is used for clamping, the rear side can be used as a stop
- Space-saving multi-clamping
- Clamping washer with toothed surface for raw parts and smooth surface for machined parts
- Preferably for mounting in a slot of width B (+0.05 mm)
- The engagement height of the clamping washer can be changed by the depth of the slot
- Body and clamping washer are case-hardened
- Supplied with fastening screws









A mm	B mm	C mm	D mm	E mm	F mm	G mm	Eccentric screw	Eccentric travel mm	Attachment screw	art.no.	€
43.2	19	12.7	25.4	2.3	19	6.4	M10 x 1.5	1.6	M8 x 16	**475051** 0008	64,50
54	25.4	11.4	33.5	2.8	25.4	9.7	M12 x 1.75	2	M10 x 20	475051 0010	76,–
75	38.1	25.2	50.8	3.3	38.1	12.7	M16 x 2	2.5	M12 x 30	475051 0012	159,–

4156

Clamping fil

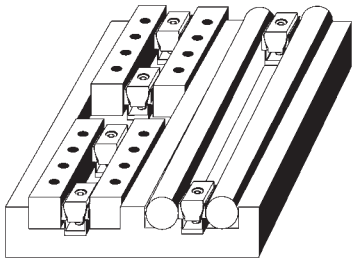
- For clamping workpieces that cannot otherwise be clamped due to their instability, shape or lack of magnetic properties
- The workpiece and film a e heated to 85 - 95 °C (furnace, heating plate, hot air etc.)
- After cooling, the holding force is approx. 30 - 200 N/cm² depending on the type or supporting surface
- Allows machining on thin or difficult-to-clamp p ts
- Can also be used to reinforce thin workpieces during machining
- Film can be used with steel, non-ferrous metals, glass, wood, most plastics and many other materials
- Contains no harmful chemicals

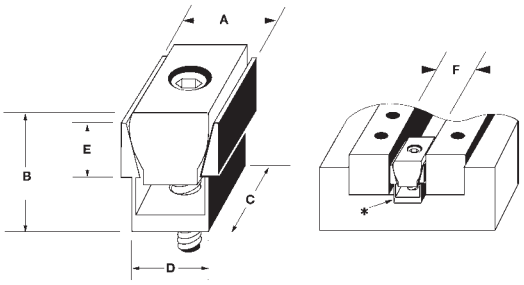
Description	art.no.	€
Clamping film, oll 250 mm x 7600 mm	**475100** 3076	220,–
Clamping film, oll 300 mm x 1500 mm	475100 3015	57,–

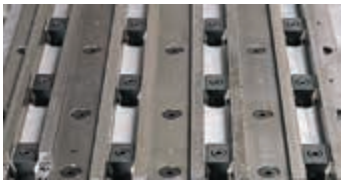
4156

Double wedge clamp

- One clamping element simultaneously clamps two workpieces
- Space-saving multi-clamping reduces auxiliary processing times and therefore unit costs
- Cost-effecti e clamping fixtu e
- For round and rectangular parts
- Clamping force up to 27 kN
- The use of a support and clamping bar further simplifies he process of constructing clamping fixtu es





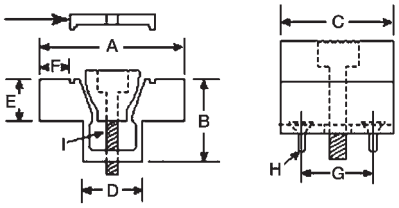


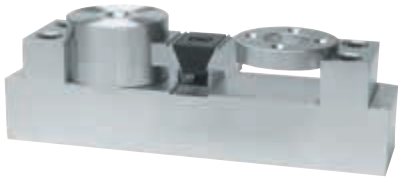
Clamp force kN	Spread mm	Interior hexagon mm	Thread	A mm	B mm	D mm	C mm	E mm	F mm	Contents	art.no.	€
0.9	0.2	1.5	M2	6.1	6.9	5.3	8.1	3.6	6.3	6 units	**475034** 0002	108,–
1.4	0.5	2	M2.5	9.1	9.7	7.9	11.9	4.7	9.5	6 units	475034 0025	108,–
2.2	1.4	3	M4	12.3	14.5	10.4	15.9	5.6	12.7	8 units	475034 0004	106,–
6.8	1.8	5	M6	18.6	19	16.1	23.8	9.5	19	6 units	475034 0006	110,–
8.9	2.4	6	M8	24.8	25.9	20.8	31.7	12.7	25.4	4 units	475034 0008	87,50
15.6	3.1	10	M12	37.3	38.6	30.8	47.6	19	38.1	2 units	475034 0012	192,–
26.7	3.8	14	M16	49.7	51.5	41.2	63.4	25.3	50.8	2 units	475034 0016	290,–

4156

Form-fit double edge clamp

- Extra wide jaws, can be milled to fit he shape of the workpiece
- For securely clamping difficult p ts
- Clamps unstable parts without distortion
- Space-saving
- Allows two workpieces to be clamped simultaneously
- Higher productivity due to reduced auxiliary processing times
- Ideal for machining centres as well as milling and drilling machines
- **Note:** A locking plate is used during form milling to ensure that the jaws remain in a stable position and vibration-free.
- Supplied with wedge clamp and screw



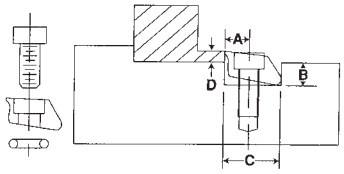


Clamp force kN	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm	Locking plate	art.no.	€
2.2	28.6	12.7	15.7	10.6	6.3	4.6	10.2	M 2.5	M 4	Yes	**475035** 0040	38,70
2.2	28.6	12.7	15.7	10.6	6.3	4.6	10.2	M 2.5	M 4	No	475035 0041	35,70
6.8	38.1	19	23.9	16.1	9.4	6.6	15.9	M 4	M 6	Yes	475035 0060	40,20
6.8	38.1	19	23.9	16.1	9.4	6.6	15.9	M 4	M 6	No	475035 0061	37,90
9	50.8	25.4	31.8	20.8	12.7	9.9	20.6	M 4	M 8	Yes	475035 0080	56,–
9	50.8	25.4	31.8	20.8	12.7	9.9	20.6	M 4	M 8	No	475035 0081	53,–
16	76.2	38.1	47.5	30.9	19.1	15.7	30.5	M 5	M 12	Yes	475035 0120	154,–
16	76.2	38.1	47.5	30.9	19.1	15.7	30.5	M 5	M 12	No	475035 0121	149,–
27	101.6	50.8	63.5	41.3	25.4	20.3	41	M 6	M 16	Yes	475035 0160	255,–
27	101.6	50.8	63.5	41.3	25.4	20.3	41	M 6	M 16	No	475035 0161	245,–

4156

Pitbull anchor clamps

- Pull-down effect wi h clamping forces up to 50 kN
- Sharp-edged for raw parts (cast iron, forged, cut parts) or with a blunt edge to avoid clamping marks
- Space-saving
- Low height
- Compact design
- High clamping force
- Strong pull-down
- No protruding edges to interfere with tools
- Multi-sided machining
- Ideal for multi-clamping
- **Note:** Dimensions B and D are guideline values



Brass

Hard. steel, blunt

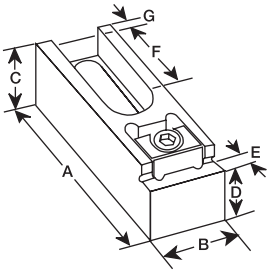
Hard. steel, sharp

Type of clamping edge	Substance	A mm	B mm	C mm	D mm	Thread	Clamping width mm	Clamping force N-m	Tightening torque N-m	Clamping route mm		art.no.	€
Sharp	Hard. steel	3.8	3.6	9.5	1.9	M 2.5	9.5	2800	1.8	0.15	1	**475036** 0250	183,–
Blunt	Hard. steel	3.8	3.6	9.5	1.9	M 2.5	9.5	2800	1.8	0.15	1	475036 0251	182,–
Blunt	Brass	3.8	3.6	9.5	1.9	M 2.5	9.5	900	0.6	0.15	1	475036 0252	184,–
Sharp	Hard. steel	5.1	4.8	12.7	2.6	M 4	12.7	6600	5.6	0.4	1	475036 0400	190,–
Blunt	Hard. steel	5.1	4.8	12.7	2.6	M 4	12.7	6600	5.6	0.4	1	475036 0401	187,–
Blunt	Brass	5.1	4.8	12.7	2.6	M 4	12.7	1800	2.8	0.4	1	475036 0402	191,–
Sharp	Hard. steel	7.6	7.2	19.05	3.8	M 6	19.1	16000	22.5	0.6	1	475036 0600	183,–
Blunt	Hard. steel	7.6	7.2	19.05	3.8	M 6	19.1	16000	22.5	0.6	1	475036 0601	182,–
Blunt	Brass	7.6	7.2	19.05	3.8	M 6	19.1	4200	5.6	0.6	1	475036 0602	184,–
Sharp	Hard. steel	10.2	11.4	25.4	6.3	M 10	25.4	26000	40	1.7	4	475036 1000	183,–
Blunt	Hard. steel	10.2	11.4	25.4	6.3	M 10	25.4	26000	40	1.7	4	475036 1001	183,–
Sharp	Hard. steel	15.2	16.3	38.1	9.5	M 12	38.1	50000	145	1.9	2	475036 1200	167,–
Blunt	Hard. steel	15.2	16.3	38.1	9.5	M 12	38.1	50000	145	1.9	2	475036 1201	167,–

4156

Pitbull universal anchor clamps

- **For T-slots**
- Can be used on fixtu e plates, T-slot work tables, grid plates, clamping cubes, etc.
- Base body hardened, supporting surfaces ground
- Supplied without fastening screw or T-slot nut

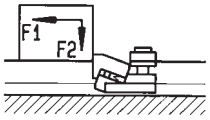


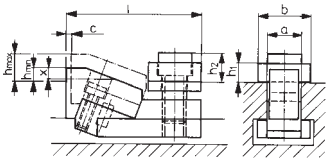
A mm	B mm	C mm	D h6 mm	E mm	F mm	G mm	H mm	Clamping force N·m	Screw	for T-slot mm	Clamping width mm	art.no.	€
104	31.7	25	18.54	9.1	43.2	12.7	0.6	1600	M 12	14, 16, 18	19.1	**475038** 0120	125,–
107	38.1	41	35	9.1	38.6	10.9	1.25	2600	M 16	22, 24	25.4	475038 0160	335,–

4156

Mini-Bulle flat cla p

- Hardened and tempered to a burnished shade
- h1 = at maximum T-slot depth in accordance with DIN 650
- To obtain low clamping heights with minimum slot depths, the clamp can be ground down by x mm
- Allows particularly flat orkpieces to be clamped
- Clamping jaws have a wedge effect hat ensures the workpiece is securely fi ed to the work table
- Horizontal forces are absorbed by a screw corresponding to the slot size; this holds the clamp securely in position without damaging the table
- **Supplied in pairs**, boxed, complete with fastening screws (DIN 912, 8.8 / ISO 4762) and a hexagonal screwdriver (ISO 2936)
- Prices per pair



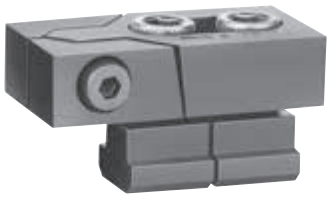


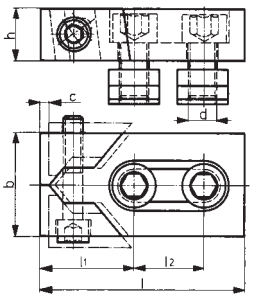
Groove width mm	c mm	h min. mm	h max. mm	x mm	l max. mm	b mm	h1 mm	h2 mm	F1 kN	F2 kN	art.no.	€
12	1.8	2.5	13.5	5	52	18	7	11	5	0.6	**466102** 0012	87,50
14	1.8	1.5	13.5	5	55	22	8	11	5.5	0.7	466102 0014	101,50
16	2.5	2.5	17	6	68	25	9	15	8	0.9	466102 0016	113,50
18	2.5	1.5	16	6	71	28	10	15	9	1	466102 0018	117,–
22	3	4.5	21.5	9	89	35	14	20	16	1.9	466102 0022	179,50

4157

Bulle deep clamping jaws

- Hardened and tempered to a burnished shade
- **Supplied in pairs**, boxed, complete with fastening screws (DIN 912, 10.9 / ISO 4762), T-slot nuts (DIN 508) and a hexagonal screwdriver (ISO 2936)
- Prices per pair





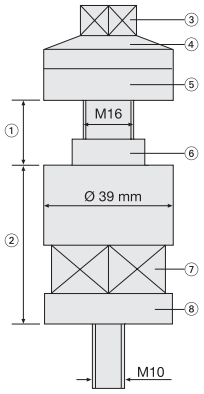
Groove width mm	c mm	h mm	b mm	l mm	l1 mm	l2 mm	d mm	F1 kN	F2 kN	art.no.	€
12	3	20	40	80	26	39	M10	16	0.6	**466103** 0012	97,50
14	3	20	40	80	26	39	M12	22	0.9	466103 0014	106,–
16	3	20	40	80	26	39	M12	22	0.9	466103 0016	113,–
16	4	25	50	100	34	46	M14	32	1.2	466103 1016	133,–
18	4	25	50	100	34	46	M16	36	1.4	466103 0018	138,50
20	4	25	50	100	34	46	M16	36	1.4	466103 0020	147,50
22	5	30	78	140	50	65	M20	36	1.4	466103 0022	247,50
24	5	30	78	140	50	65	M20	36	1.4	466103 0024	264,–
28	5	30	78	140	50	65	M24	40	1.6	466103 0028	316,–
30	5	30	78	140	50	65	M24	40	1.6	466103 0030	356,–

4157

Clamping bolts

- Secure, safe, precise and powerful clamping for practically any workpiece shape
- Also suitable as a clamping support
- Length tolerance class js6, ensures that clamping is parallel to the table
- Standard clamping range 8 - 40 mm, can be extended to a maximum of 87 mm using clamping screws
- Description:

1. Clamping range
2. Length (js6)
3. Wrench size 18
4. Clamping screw
5. Clamping ring
6. Diameter 22 mm
7. Wrench size 36 mm
8. Spacer washer



Clamping bolts

- Supplied with M10 threaded bolts, spacer washer, clamping screw, clamping ring

Description	Length mm	Clamping range mm	art.no.	€
With fi ed thread M10	50	8 - 40	**476001** 0050	109,–
With replaceable threaded bolts M10	100	8 - 40	476001 0100	117,–
With replaceable threaded bolts M10	150	8 - 40	476001 0150	164,–
			4140	

Clamping screws

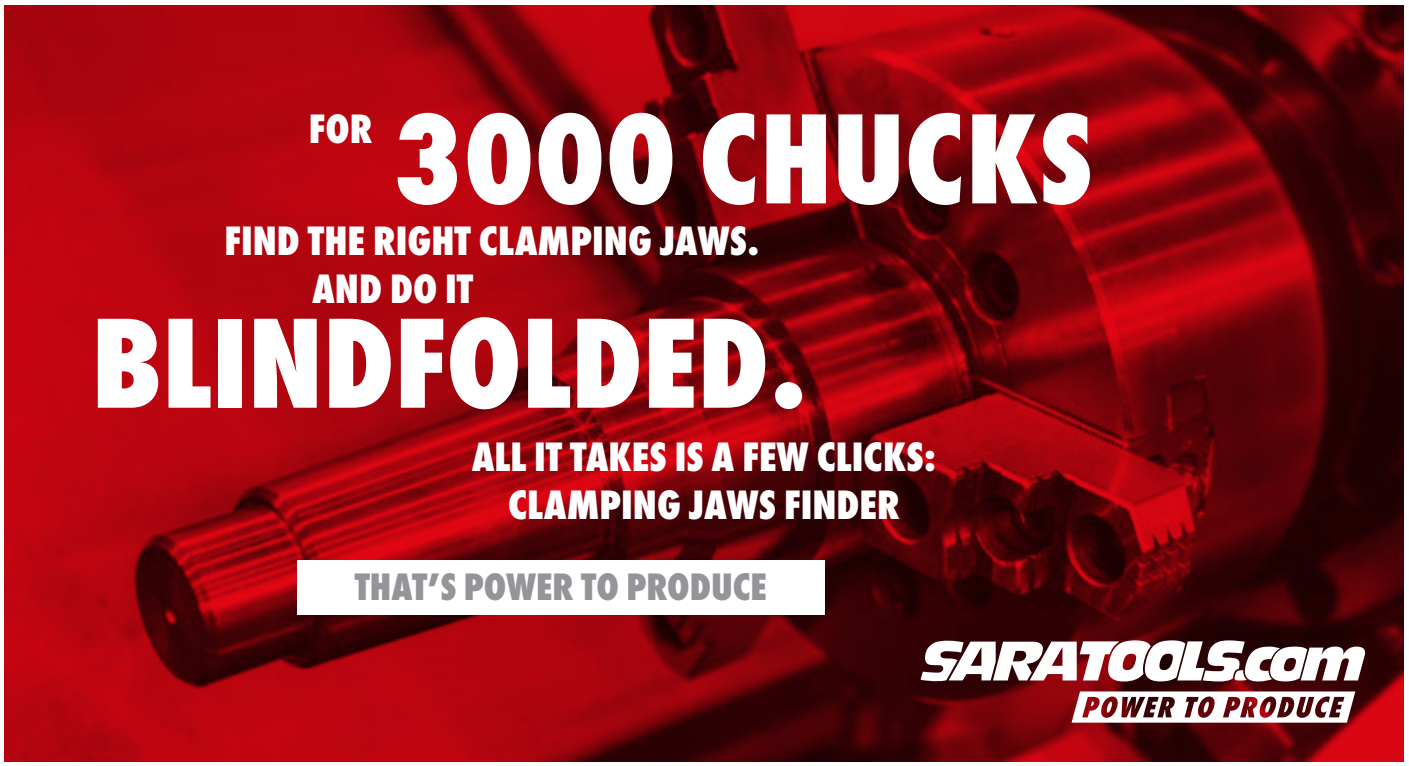
Clamping range mm	art.no.	€
8 - 40	**476002** 0840	33,20
40 - 67	476002 4067	60,–
65 - 87	476002 6587	73,–
	4140	

Clamping ring

Designation	art.no.	€
Clamping ring	**476003** 0001	26,–
	4140	

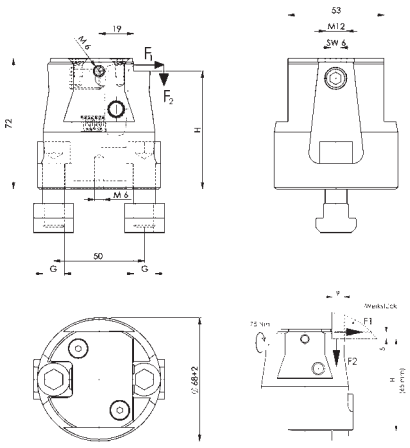
Threaded bolts

Thread	art.no.	€
M10	**476004** 0010	27,90
M12	476004 0012	27,90
M14	476004 0014	27,90
M16	476004 0016	27,90
	4140	



Side clamp

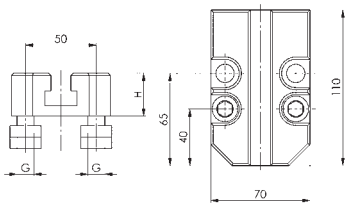
- M12 x 14, complete with slot nut
- Base body made from case-hardened steel, nitrided
- Tensioning hook made from case-hardened steel
- Tightening torque 75 Nm
- Attachment with screws, strength class 10.9
- Compact design
- Pull-down effect ensu es that workpieces are securely and safely attached
- Increased plate tension for adding bores and slots
- Clamps plates laterally, allowing the full surface to be machined without any protruding contours
- Lateral thread allows a stop to be attached
- Can be used horizontally and vertically
- Reduced tooling costs
- Diverse and variable applications
- Can be used as a clamping element and as a fi ed stop
- Moving the adjustment screw causes tensioning hooks to clamp the workpiece. At the same time, a pull-down effect is c eated on the supporting surface.
- Attaching a lateral stop enables the workpiece to be clamped repeatedly in the same position.



Groove width mm	Thread	H mm	F1 kN	F2 kN	art.no.	€
14	M12	65 ± 0.1	12	7	**467040** 1214 4157	250,–

Base plate, transverse

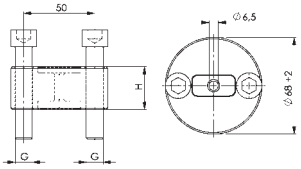
- For clamping at right angles to the table slot
- Base body made from tempering steel, hardened and burnished
- Attachment with screws, strength class 10.9
- M12 x 14, complete with slot nut



Groove width mm	Thread	H mm	art.no.	€
14	M12	30 ± 0.1	**467041** 1214 4157	128,50

Base plate

- Precise side clamp movement by means of an alignment block on the work table
- Workpiece support increased by 30 mm
- Base body made from tempering steel, hardened and burnished
- Attachment with screws, strength class 10.9



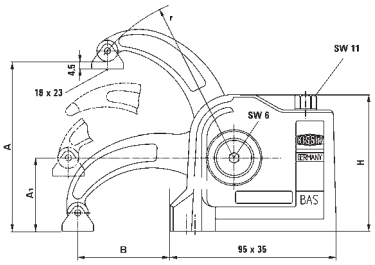
Groove width mm	Thread	H mm	art.no.	€
14	M12	30 ± 0.1	**467042** 1214 4157	88,–

... makes the distinction.

ATORN®
Performance demands quality

Compact clamp

- Compact design
- Clamping force up to 16 kN
- Special polyamide seal protects the inside from dirt
- Ideal access when machining
- Clamps workpieces quickly
- Supplied without chuck key or clamping screw



Casing and lever arm made from tempering steel

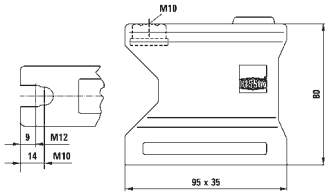
Figure 1

Figure 2

Compact clamp

A mm	A1 mm	B mm	r mm	H mm	Cyl. Screws DIN 912	Clamp force kN	Illustration	art.no.	€
88	42	40	75	78	M10 / M12	16	1	**468010** 0088	254,20
97	42	60	94	78	M10 / M12	12	1	468010 0097	263,30
97	42	60	94	78	M10 / M12	12	2	468010 0197	262,50

4192



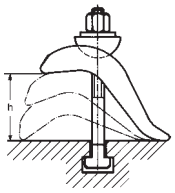
Clamp base

Clamp height mm	Cyl. Screws DIN 912	art.no.	€
80	M10 / M12	**468011** 0010	80,20

4192

Clamping claw

- **Infini ely variable**
- Forged steel, hardened and tempered, galvanised
- Complete with DIN 787 T-slot screws, nuts and washers
- For quickly bridging various clamping heights with no additional supports
- Requires little space on the work table
- Designed for maximum loads
- Particularly suitable as a clamping device for cutting and stamping tools

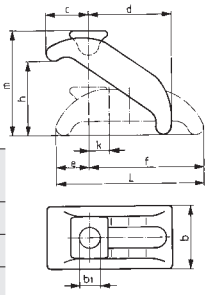


T-groove dimension DIN 787	Clamp height mm	T-groove screw DIN 787	Clamps L x W mm	art.no.	€
12	0 - 50	12 M12 x 125	140 x 50	**466001** 0012	47,70
14	0 - 50	14 M12 x 125	140 x 50	466001 0014	48,60
16	0 - 75	16 M16 x 160	140 x 50	466001 0016	52,50
18	0 - 75	18 M16 x 160	140 x 50	466001 0018	52,50
20	0 - 85	20 M20 x 200	175 x 60	466001 0020	71,50
22	0 - 85	22 M20 x 200	175 x 60	466001 0022	73,–

4157

Clamping claw, short

- **Without clamping screw; with U-section**
- Infinite y variable
- Hardened and tempered, galvanised and blue passivated
- Supplied without T-slot screws or nuts



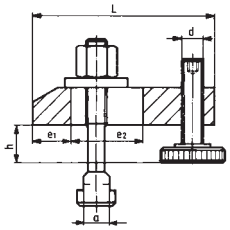
T-groove dimension DIN 787	T-groove screw DIN 787	L mm	b mm	b1 mm	c mm	d mm	e mm	f mm	h mm	k mm	m mm	art.no.	€
12/14	M12	88	38	13	28	48	23	68	0 - 35	14	30-55	**466002** 0012	26,50
16/18	M16	130	56	18	38	74	29	101	0 - 55	18	42-84	466002 0016	32,80
20/22	M20	140	66	22	46	80	32	112	0 - 65	20	50-100	466002 0020	42,50
24/28	M24	174	76	26	52	100	39	135	0 - 75	24	54-111	466002 0024	60,50

4157

Clamp sets

DIN 6314V DIN 6316V

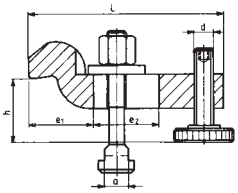
- **With adjustable support screw**
- Tempering steel, painted
- Complete with DIN 787 T-slot screws, nuts and washers
- Supplied without notched clamping lever, please order separately



Bevelled, DIN 6314 V

T-groove dimension a mm	T-groove screw DIN 787	Clamp height mm	d mm	e1 mm	e2 mm	art.no.	€
10	M10 x 80	8 - 32	M10	15	30	**466005** 0010	26,40
12	M12 x100	10 - 40	M12	21	40	466005 0012	30,50
14	M12 x100	10 - 38	M12	21	40	466005 0014	30,50
16	M16 x125	13 - 48	M16	26	45	466005 0016	41,90
18	M16 x125	13 - 46	M16	26	45	466005 0018	43,70
20	M20 x160	16 - 65	M20	30	60	466005 0020	68,50
22	M20 x160	16 - 65	M20	30	60	466005 0022	69,–

4157



Offs t, DIN 6316 V

T-groove dimension a mm	T-groove screw DIN 787	Clamp height mm	d mm	e1 mm	e2 mm	art.no.	€
10	M10 x 80	22 - 46	M10	36	32	**466010** 0010	35,50
12	M12 x100	28 - 58	M12	44	40	466010 0012	40,90
14	M12 x100	28 - 56	M12	44	40	466010 0014	41,10
16	M16 x125	36 - 71	M16	51.5	50	466010 0016	55,50
18	M16 x125	36 - 69	M16	51.5	50	466010 0018	56,–
20	M20 x160	43 - 92	M20	59	70	466010 0020	88,–
22	M20 x160	43 - 92	M20	59	70	466010 0022	88,50

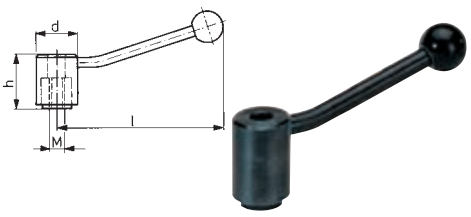
4157

Notched clamping lever

- Steel, burnished

Thread	l mm	d mm	h mm	suitable for	art.no.	€
M12	135	33	48	4660050012 4660050014 4660100012 4660100014	**466011** 0012	58,50
M16	158	40	64	4660050016 4660050018 4660100016 4660100018	466011 0016	67,–

4157

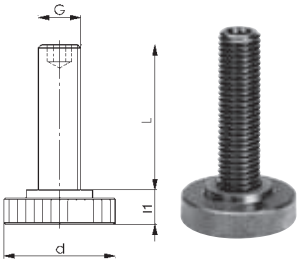


Support screw, DIN 6314 S

- Hardened and tempered
- Strength class 8.8

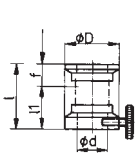
Thread	d mm	l mm	l1 mm	art.no.	€
10	30	39	8	**466012** 0010	10,90
12	36	49	10	466012 0012	11,40
12	36	94	10	466012 0112	16,30
16	42	55	13	466012 0016	14,30
16	42	90	13	466012 0116	19,40
20	50	69	16	466012 0020	21,30
20	50	109	16	466012 0120	24,70

4157



Clamp holder

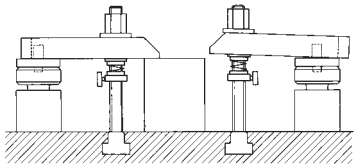
- **Spring-loaded, with brass locking screw**
- The clamp holder supports the clamp when positioning and removing the workpiece. This makes unclamping both quick and safe.



f = spring deflectio

model	D mm	d mm	l mm	l1 mm	Spring deflectio mm	suitable for screws	art.no.	€
1	22	10.5	30	22	8	M8 - M10	**466055** 0001	19,60
2	26	14.5	32	22	10	M12 - M14	466055 0002	21,10
3	32	18.5	38	26	12	M16 - M18	466055 0003	22,30
4	38	22.5	40	28	12	M20 - M22	466055 0004	24,90
5	45	27.5	44	32	12	M24 - M27	466055 0005	30,30

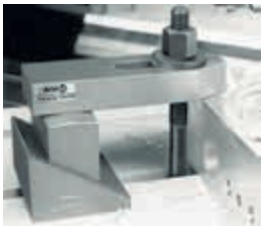
4157

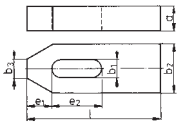


Clamps

DIN 6314 | DIN 6315B | DIN 6316

- Tempering steel, painted



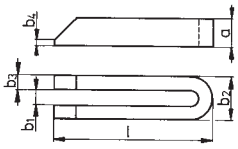


Standard version, DIN 6314

Slit width mm	l mm	a mm	b2 mm	b3 mm	e1 mm	e2 mm	for screws	art.no.	€
6.6	50	10	20	8	10	20	M6	**466020** 0007	5,65
9	60	12	25	10	13	22	M8	466020 0009	6,95
11	80	15	30	12	15	30	M10	466020 0011	8,30
14	100	20	40	14	21	40	M12 M14	466020 0014	8,60
18	125	25	50	18	26	45	M16 M18	466020 0018	11,60
22	160	30	60	22	30	60	M20 M22	466020 0022	22,40
26	200	30	70	26	35	80	M24	466020 0026	32,–
33	250	40	80	34	45	100	M30	466020 0033	83,50

4157

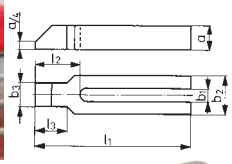
Forked clamp, bevelled, DIN 6315 B



Slit width mm	l mm	a mm	b2 mm	b3 mm	b4 mm	for screws	art.no.	€
6.6	60	12	19	6	3	M6	**466025** 0007	7,35
9	80	15	25	8	4	M8	466025 0009	7,45
11	100	20	31	10	5	M10	466025 0011	8,70
14	125	25	38	12	6	M12 M14	466025 0014	9,95
18	160	30	48	15	8	M16 M18	466025 0018	14,10
22	200	40	52	15	10	M20 M22	466025 0022	21,40
26	200	40	66	20	10	M24	466025 0026	26,50
33	250	50	74	20	12	M30	466025 0034	45,70

4157

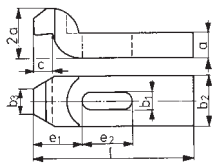
Forked clamp with nose



Slit width mm	l1 mm	a mm	b2 mm	b3 mm	l2 mm	l3 mm	for screws	art.no.	€
9	100	15	30	16	32	18	M8	**466030** 0009	19,60
11	125	20	30	20	38	24	M10	466030 0011	27,10
14	160	25	40	24	47	30	M12 M14	466030 0014	22,70
18	200	30	50	28	57	36	M16 M18	466030 0018	31,–
22	250	40	60	35	68	45	M20 M22	466030 0022	57,–
26	315	40	70	43	83	56	M24	466030 0026	70,–
33	400	50	80	50	88	56	M30	466030 0034	137,50

4157

Standard, offs t, DIN 6316

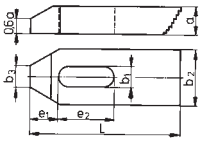


Slit width mm	l mm	a mm	b2 mm	b3 mm	c mm	e1 mm	e2 mm	for screws	art.no.	€
6.6	60	10	20	10	8	22	20	M6	**466040** 0007	11,–
9	80	12	25	12	9	27.5	25	M8	466040 0009	12,40
11	100	15	30	15	12	36	32	M10	466040 0011	13,30
14	125	20	40	20	16	44	40	M12 M14	466040 0014	13,60
18	160	25	50	25	20	51.5	50	M16 M18	466040 0018	22,–
22	200	30	60	30	24	59	70	M20 M22	466040 0022	35,90
26	250	35*	70	35	25	76.5	80	M24	466040 0026	61,50
33	315	50	80	40	40	96	100	M30	466040 0033	155,–

4157

With stepped teeth

- Compatible with universal clamping supports 466047 0001-0002-0003
- The long version is designed for large spans due to wide slot spacing or greater workpiece clamping depths, e.g. on engraving machines.

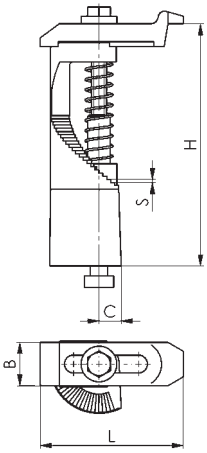


Slit width mm	l mm	a mm	b2 mm	b3 mm	e1 mm	e2 mm	for screws	art.no.	€
6.6	50	10	20	8	10	20	M6	**466046** 0007	9,70
9	60	12	25	10	13	22	M8	466046 0009	11,90
11	80	15	30	12	15	30	M10	466046 0011	15,–
14	100	20	40	14	21	40	M12 M14	466046 0014	15,10
18	125	25	50	18	26	45	M16 M18	466046 0018	21,70
22	160	30	60	22	30	60	M20 M22	466046 0022	34,70
26	200	30	70	26	35	80	M24	466046 0026	55,–

4157

Helical clamp

- Special cast iron
- Screw and threaded sleeve strength class 8.8
- Quick to use as a clamping unit
- Finely graded steps allow rapid adjustment for any workpiece height up to approx. 320 mm
- Requires little space on the work table thanks to the compact design



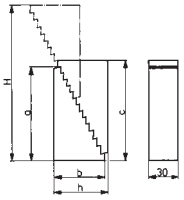
model	a mm	H mm	S mm	C mm	L mm	B mm	art.no.	€
0	12	0 - 45	0.75	14	140	34	**466044** 1200	113,50
1	12	15 - 45	0.75	14	110	34	466044 1201	115,50
2	12	30 - 75	1.25	15	112	34	466044 1202	134,50
3	12	60 - 135	2.5	16	112	34	466044 1203	171,50
4	12	120 - 195	2.5	18	112	34	466044 1204	227,50
5	12	180 - 255	2.5	19	112	34	466044 1205	261,–
0	14	0 - 45	0.75	14	140	34	466044 1400	116,50
1	14	15 - 45	0.75	14	112	34	466044 1401	117,–
2	14	30 - 75	1.25	15	112	34	466044 1402	138,50
3	14	60 - 135	2.5	16	112	34	466044 1403	176,–
4	14	120 - 195	2.5	18	112	34	466044 1404	235,50
5	14	180 - 255	2.5	19	112	34	466044 1405	265,–
0	16	0 - 70	1.25	20	160	50	466044 1600	184,50
1	16	25 - 70	1.25	20	125	50	466044 1601	185,50
2	16	50 - 120	2.5	21	125	50	466044 1602	225,–
3	16	100 - 220	3.75	21	125	50	466044 1603	297,–
4	16	200 - 320	3.75	24	125	50	466044 1604	392,–
0	18	0 - 70	1.25	20	160	50	466044 1800	195,–
1	18	25 - 70	1.25	20	125	50	466044 1801	196,–
2	18	50 - 120	2.5	21	125	50	466044 1802	239,50
3	18	100 - 220	3.75	21	125	50	466044 1803	310,–
4	18	200 - 320	3.75	24	125	50	466044 1804	412,–

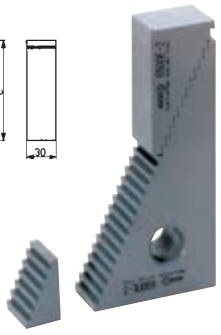
4157

Universal clamping supports

- **Individual and as a set**
- Tempering steel, painted
- Can be used in pairs with all clamps and individually with the toothed clamps
- Vertical step height 4.65 mm, horizontal step height 2.3 mm

466047 0020



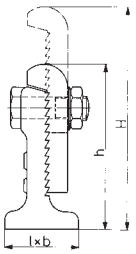


model	h - H mm	a mm	b mm	c mm	art.no.	€
1	23 - 51	33	19	33	**466047** 0001	4,16
2	39 - 107	66	35.5	66	466047 0002	7,55
3	71 - 208	131	68	131	466047 0003	18,70
Set consisting of 8x Model 1, 8x Model 2, 4x Model 3	22 - 208				466047 0020	176,–

4157

Clamping supports, toothed

- **(Serrated jacks)**
- Malleable cast iron, painted
- Step height 5.2 mm
- Plane-milled standing surface



model	h - H mm	l mm	b mm	Load capacity kN	art.no.	€
3	155 - 223	60	60	60	**466049** 0003	97,–
4	220 - 340	80	80	90	466049 0004	175,–

4157

Screw jack

- **With flat suppo t**
- Tempering steel, painted
- Spindle: Trapezoidal thread, self-locking, with end stop body

Centre hole Ø mm	Head Ø mm	Load capacity kN	Base body Ø mm	Support surface height mm	art.no.	€
12	31	25	31	38 - 50	**466015** 3150	26,20
12	50	100	50	42 - 52	466015 5052	34,80
12	50	100	50	50 - 70	466015 5070	37,20
12	50	100	50	70 - 100	466015 5010	42,40
12	68	120	68	100 - 140	466015 7014	75,–
12	80	170	70	140 - 210	466015 7021	135,50
12	100	350	80	190 - 300	466015 8010	246,–

4157

Aluminium screw jack

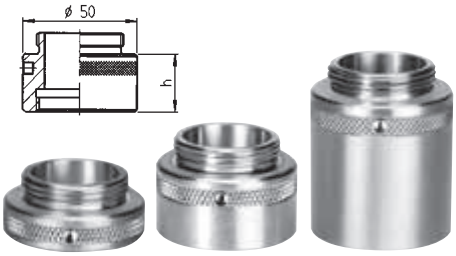
- **With chip guard**
- Wiper protects the vice thread against the ingress of swarf
- Centring hole Ø 12 mm
- Spindle made from tempering steel, burnished
- Trapezoidal thread, self-locking, with end stop body

Description	Head Ø mm	Base body Ø mm	Load capacity kN	Support surface height mm	art.no.	€
Screw jack with aluminium foot	50	50	30	75 - 88	**466016** 0001	99,50
Screw jack with magnetic foot	50	50	30	75 - 88	466016 0002	124,–

4157

Aluminium spacer rings

- For subsequent height extension



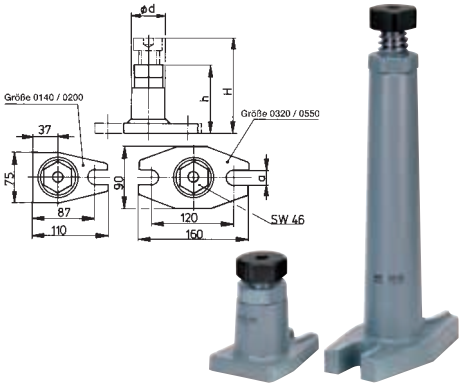
h mm	art.no.	€
12.5	**466016** 0125	12,50
25	466016 0250	17,10
50	466016 0500	30,30

4157

466016 0125 466016 0250 466016 0500

Screw jack ATLAS

- **With locking nut**
- Centring hole Ø 12 mm
- Spindle, complete Tempering steel, with trapezoidal thread
- Spindle head, burnished
- Grey cast iron base body, painted

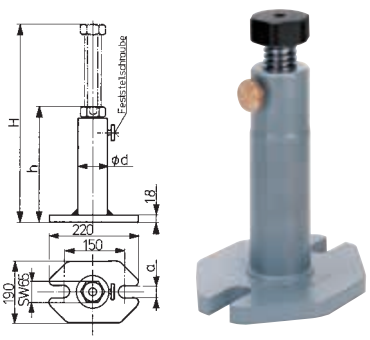


h - H mm	a mm	Load capacity kN	d mm	art.no.	€
100 - 140	18	60	46	**466017** 0140	80,50
140 - 200	18	60	46	466017 0200	101,–
200 - 320	22	40	46	466017 0320	140,50
320 - 550	22	25	46	466017 0550	164,–

4157

Screw jack, heavy-duty

- **Heavy-duty design, with brass locking screw**
- Centring hole Ø 12 mm
- Spindle, complete Tempering steel, with trapezoidal thread
- Spindle head, burnished
- Base body made from tempering steel, painted

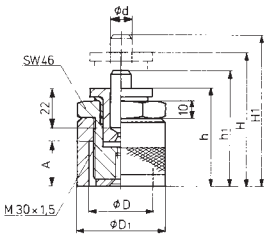


h - H mm	a mm	d mm	Load capacity kN	art.no.	€
200 - 300	26	65	80	**466018** 0300	264,–
290 - 470	26	65	60	466018 0460	318,–
430 - 750	26	65	50	466018 0750	404,–
710 - 1250	26	65	40	466018 1250	532,–

4157

Height-adjustable threaded pedestal

- With DIN 6325 cylindrical pins, 12 x 50 and 12 x 80 (1 of each)
- Centring hole Ø 12 mm
- Tempering steel, burnished
- Spindle: metric fine thread, M30 x 1.5, with end stop body
- Sliding insert runs on pressed-in plain bearing bush

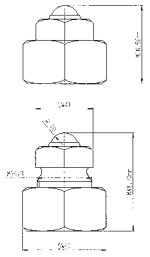


h - H mm	with straight shank 12 x 50 mm	with straight shank 12 x 80 mm	d mm	D1 mm	D mm	Load capacity kN	A mm	art.no.	€
55 - 75	83 - 103	113 - 133	12	50	36	30	25	**466050** 0075	113,–
75 - 115	103 - 143	133 - 173	12	50	36	30	45	466050 0115	117,50

4157

Threaded pedestal

- **With rotatable ball**
- Steel hardened and tempered to a burnished shade
- Hardened ball
- Punctiform support, particularly suitable for supporting and aligning free-formed surfaces such as cast iron and forged workpieces
- Calibration accuracy approx. 0.1 mm



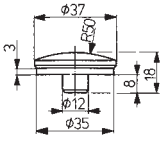
h - H mm	Load capacity kN	art.no.	€
56 - 70	30	**466050** 0070	47,60

4157

Attachments

- **For alignment and support elements**
- Steel hardened and tempered to a burnished shade

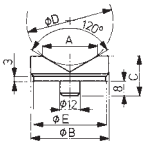
Ball attachment

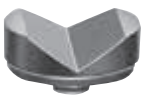


Ø mm	art.no.	€
37	**466019** 0001	8,30

4157

V-block attachment

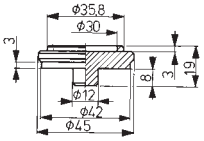




A mm	B mm	C mm	D min. mm	E mm	max. Ø mm	art.no.	€
32	45	23	10	42	50	**466019** 0010	20,40
56	65	38	22	62	100	466019 0011	41,10

4157

Centring plate

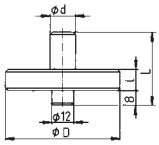


Description	art.no.	€
For mounting Ø 50 mm screw jacks	**466019** 0020	12,60

4157

Fixing attachment

- For forked clamps

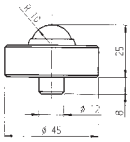


D mm	d mm	L mm	l mm	art.no.	€
63	14	40	12	**466019** 0030	31,80
78	25	53	15	466019 0031	37,60

4157

Attachment with rotatable ball

- Hardened ball

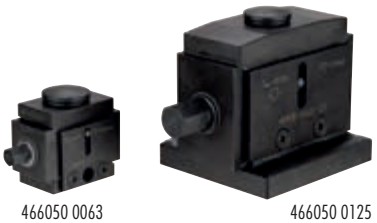


Load capacity kN	art.no.	€
30	**466019** 0040	31,70

4157

Correcting wedge HERKULES

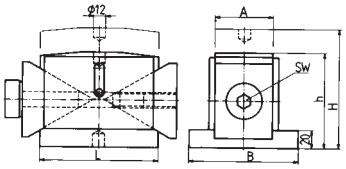
- **Height wedge**
- Centring hole Ø 12 mm
- Ductile iron and steel hardened and tempered to a burnished shade, incl. ball attachment 466019 0001
- Correcting wedge can still be adjusted slightly at a load equal to one third of the maximum load capacity
- Precision-machined wedge surfaces enable smooth, sensitive adjustments (< 1/10 mm) using either a knurled-head screw or hexagonal screwdriver
- Double wedge effect, p oduces considerable lift and precise vertical movement without lateral displacement
- Height wedge tried and tested with heavy cast iron or forged parts on large machine tools



466050 0063 466050 0125

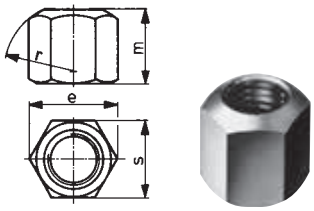
h - H mm	A mm	B mm	L mm	Wr. width mm	H* mm/rev	Load capacity kN	art.no.	€
50 - 63	40	40	63	13	0.86	40	**466050** 0063	273,–
100 - 125	60	115	125	24	1.16	100	466050 0125	587,–
170 - 190	80	145	175	36	2.02	250	466050 0190	1.535,–

4157



Hexagonal nuts

DIN 6330B | DIN 6334 | DIN 6331

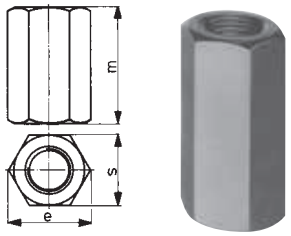


1.5 x D high, DIN6330B

- Hardened and tempered, strength class 10
- With spherical end, can be used directly with DIN 6319D or G conical washers
- With flat end, can be used wi h DIN 6340 hardened washers

Thread	Wr. width mm	e mm	m mm	r mm	art.no.	€
M6	10	11.05	9	9	**466510** 0006	0,45
M8	13	14.4	12	12	466510 0008	0,45
M10	16	17.8	15	15	466510 0110	0,62
M10	17	18.9	15	15	466510 0010	0,62
M12	18	20.03	18	17	466510 0112	0,73
M12	19	21.1	18	17	466510 0012	0,73
M14	21	23.4	21	20	466510 0114	1,42
M14	22	24.5	21	20	466510 0014	1,48
M16	24	26.8	24	22	466510 0016	1,36
M18	27	30.1	27	24	466510 0018	2,58
M20	30	33.5	30	27	466510 0020	2,38
M22	34	37.7	33	30	466510 0122	3,94
M22	32	35.7	33	30	466510 0022	4,46
M24	36	40	36	32	466510 0024	3,86
M27	41	45.6	40	36	466510 0027	6,55
M30	46	51.3	45	41	466510 0030	9,70
M36	55	61.3	54	50	466510 0036	18,70

4158

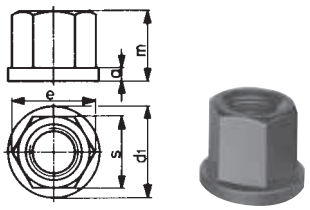


3 x D high, DIN6334

- Hardened and tempered, strength class 10
- Connecting element between DIN 787 (T-slot screw) and DIN 6379 (stud)
- **Not a screw-through version**
- Minimum screw-in length = 1xD

Thread	Wr. width mm	e mm	m mm	art.no.	€
M6	10	11.05	18	**466515** 0006	1,54
M8	13	14.4	24	466515 0008	1,56
M10	16	17.8	30	466515 0110	1,82
M10	17	18.9	30	466515 0010	1,82
M12	18	20.03	36	466515 0112	2,–
M12	19	21.1	36	466515 0012	2,–
M14	21	23.4	42	466515 0114	3,08
M14	22	24.5	42	466515 0014	3,08
M16	24	26.8	48	466515 0016	3,44
M18	27	30.1	54	466515 0018	4,80
M20	30	33.5	60	466515 0020	6,30
M22	34	37.7	66	466515 0122	9,20
M22	32	35.7	66	466515 0022	9,20
M24	36	40	72	466515 0024	10,30
M27	41	45.6	81	466515 0027	15,80
M30	46	51.3	90	466515 0030	20,70
M36	55	61.3	108	466515 0036	40,80

4158



1.5 x D high, DIN 6331 with collar

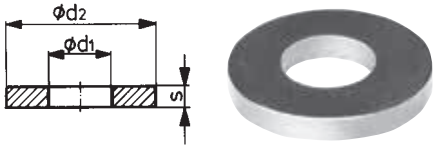
- Hardened and tempered, strength class 10
- Turned and milled

Thread	Wr. width mm	e mm	m mm	a mm	d1 mm	art.no.	€
M6	10	11.05	9	3	14	**466520** 0006	2,50
M8	13	14.4	12	3.5	18	466520 0008	2,52
M10	16	17.8	15	4	22	466520 0110	2,62
M10	17	18.9	15	4	22	466520 0010	2,62
M12	18	20.03	18	4	25	466520 0112	2,70
M12	19	21.1	18	4	25	466520 0012	2,70
M14	21	23.4	21	4.5	28	466520 0114	3,20
M14	22	24.5	21	4.5	28	466520 0014	3,20
M16	24	26.8	24	5	31	466520 0016	4,10
M18	27	30.1	27	5	34	466520 0018	5,55
M20	30	33.5	30	6	37	466520 0020	5,75
M22	34	37.7	33	6	40	466520 0122	8,35
M22	32	35.7	33	6	40	466520 0022	8,35
M24	36	40	36	6	45	466520 0024	9,60
M27	41	45.6	40	8	50	466520 0027	21,20
M30	46	51.3	45	8	58	466520 0030	24,–
M36	55	61.3	54	10	68	466520 0036	35,50

4158

Washers

DIN 6340 | DIN 6319D | DIN 6319C | DIN 6319G



Standard version, DIN 6340

- Hardened and tempered (350 + 80 Hv 30)
- * = DIN-compliant dimensions, but stamped and pressed fla

for thread	d1 mm	d2 mm	s mm	art.no.	€
M6	6.4	17	3	**466525** 0006	0,63
M8	8.4	23	4	466525 0008	0,67
M10	10.5	28	4	466525 0010	0,71
M12	13	35	5	466525 0012	0,84
M14*	15	40	5	466525 0014	0,96
M16	17	45	6	466525 0016	1,16
M18*	19	45	6	466525 0018	1,50
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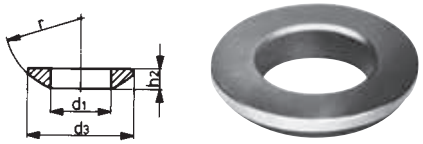
for thread	d1 mm	d2 mm	s mm	art.no.	€
M20	21	50	6	466525 0020	1,86
M22*	23	50	8	466525 0022	2,26
M24	25	60	8	466525 0024	2,82
M27*	28	68	10	466525 0027	4,78
M30	31	68	10	466525 0030	4,82
M36*	38	80	10	466525 0036	8,15
					4158

Spherical washer, DIN 6319 D

- Case-hardened and phosphate-treated, suitable for screw strengths equivalent to class 8.8
- For use only **with flat closed ing surfaces**
- (not permissible for longitudinal slots - for this purpose, we recommend DIN 6319G)

for thread	max. transferable static bolt force kN	d2 mm	d4 mm	h3 mm	art.no.	€
M6	9	7.1	12	2.8	**466530** 0006	0,54
M8	17	9.6	17	3.5	466530 0008	0,56
M10	26	12	21	4.2	466530 0010	0,73
M12	38	14.2	24	5	466530 0012	0,83
M14	53	16.5	28	5.6	466530 0014	1,50
					4158	

for thread	max. transferable static bolt force kN	d2 mm	d4 mm	h3 mm	art.no.	€
M16	73	19	30	6.2	466530 0016	1,60
M20	117	23.2	36	7.5	466530 0020	2,44
M24	168	28	44	9.5	466530 0024	4,04
M30	269	35	56	12	466530 0030	7,20
M36	394	42	68	15	466530 0036	16,10
					4158	

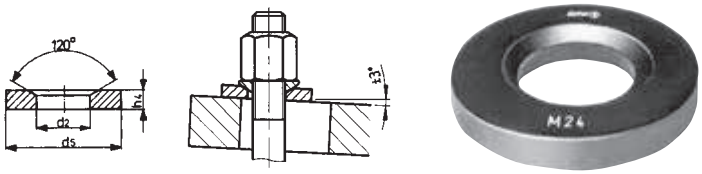


Spherical washer, DIN 6319 C

- Case-hardened and phosphate-treated

for thread	d1 mm	d3 mm	h2 mm	r mm	art.no.	€
M6	6.4	12	2.3	9	**466535** 0006	0,47
M8	8.4	17	3.2	12	466535 0008	0,54
M10	10.5	21	4	15	466535 0010	0,73
M12	13	24	4.6	17	466535 0012	0,84
M14	15	28	5	22	466535 0014	1,30
					4158	

for thread	d1 mm	d3 mm	h2 mm	r mm	art.no.	€
M16	17	30	5.3	22	466535 0016	1,42
M20	21	36	6.3	27	466535 0020	2,02
M24	25	44	8.2	32	466535 0024	3,26
M30	31	56	11.2	41	466535 0030	6,30
M36	37	68	14	50	466535 0036	15,10
					4158	



Spherical washer, DIN 6319 G

- Stamped, pressed, hardened and tempered
- Particularly suitable for use with clamp slots
- Enables the respective clamping bolt to swivel out by 3°
- * = deviates from DIN

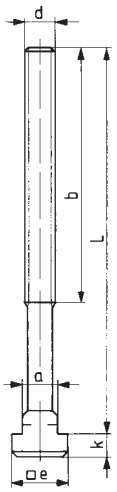
for thread	d2 mm	d5 mm	h4 mm	art.no.	€
M6	7.1	17	4	**466540** 0006	1,32
M8	9.6	24	5	466540 0008	1,32
M10	12	30	5	466540 0010	1,32
M12	14.2	36*	6	466540 0012	1,56
M14	16.5	40	6	466540 0014	2,36
				4158	

for thread	d2 mm	d5 mm	h4 mm	art.no.	€
M16	19	44*	7	466540 0016	2,36
M20	23.2	50	8	466540 0020	3,32
M24	28	60	10	466540 0024	5,65
M30	35	68	10*	466540 0030	9,20
M36	42	80	12	466540 0036	19,40
				4158	

Screws for T-slots

DIN 787

- **Complete with nut and washer**
- Forged, with milled T-slot guide and rolled thread
- M6 - M12 hardened and tempered to strength class 10.9
- M14 - M42 hardened and tempered to strength class 8.8
- Further sizes available on request



Groove width mm	d mm	L mm	b mm	a mm	e mm	k mm	art.no.	€
6	M6	25	15	5.7	10	4	**466501** 0601	7,45
6	M6	40	28	5.7	10	4	466501 0602	7,60
6	M6	63	40	5.7	10	4	466501 0603	8,20
8	M8	32	22	7.7	13	6	466501 0801	8,20
8	M8	50	35	7.7	13	6	466501 0802	8,50
8	M8	80	50	7.7	13	6	466501 0803	8,80
10	M10	40	30	9.7	15	6	466501 1001	8,45
10	M10	63	45	9.7	15	6	466501 1002	7,95
10	M10	80	50	9.7	15	6	466501 1012	8,15
10	M10	100	60	9.7	15	6	466501 1003	8,35
12	M12	50	35	11.7	18	7	466501 1201	8,50
12	M12	63	40	11.7	18	7	466501 1202	8,65
12	M12	80	55	11.7	18	7	466501 1203	8,90
12	M12	100	65	11.7	18	7	466501 1223	9,40
12	M12	125	75	11.7	18	7	466501 1204	9,65
12	M12	160	100	11.7	18	7	466501 1224	11,60
12	M12	200	120	11.7	18	7	466501 1205	11,60
14	M12	50	35	13.7	22	8	466501 1210	8,50
14	M12	63	45	13.7	22	8	466501 1211	8,75
14	M12	80	55	13.7	22	8	466501 1212	8,95
14	M12	100	65	13.7	22	8	466501 1222	9,60
14	M12	125	75	13.7	22	8	466501 1213	10,10
14	M12	160	100	13.7	22	8	466501 1233	11,10
14	M12	200	120	13.7	22	8	466501 1214	11,20
16	M14	63	45	15.7	25	9	466501 1401	10,10
16	M14	80	55	15.7	25	9	466501 1411	11,–
16	M14	100	65	15.7	25	9	466501 1402	11,40
16	M14	125	75	15.7	25	9	466501 1412	11,80
16	M14	160	100	15.7	25	9	466501 1403	12,30
16	M14	250	120	15.7	25	9	466501 1404	16,10
16	M16	63	45	15.7	25	9	466501 1601	11,30
16	M16	80	55	15.7	25	9	466501 1602	11,90
16	M16	100	65	15.7	25	9	466501 1603	12,20
16	M16	125	85	15.7	25	9	466501 1623	13,50
16	M16	160	100	15.7	25	9	466501 1604	14,10
16	M16	200	125	15.7	25	9	466501 1605	15,–

4158

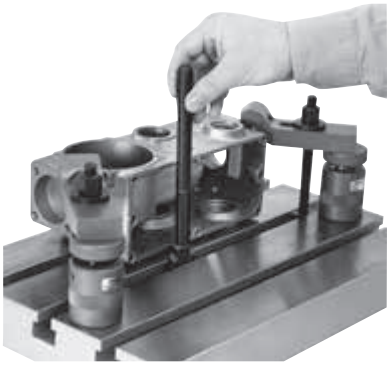
Groove width mm	d mm	L mm	b mm	a mm	e mm	k mm	art.no.	€
16	M16	250	150	15.7	25	9	466501 1606	17,–
18	M16	63	45	17.7	28	10	466501 1610	11,70
18	M16	80	55	17.7	28	10	466501 1611	12,10
18	M16	100	65	17.7	28	10	466501 1612	12,40
18	M16	125	85	17.7	28	10	466501 1622	13,50
18	M16	160	100	17.7	28	10	466501 1613	14,30
18	M16	200	125	17.7	28	10	466501 1614	15,40
18	M16	250	150	17.7	28	10	466501 1615	17,40
20	M20	80	55	19.7	32	12	466501 2001	17,40
20	M20	100	65	19.7	32	12	466501 2021	17,90
20	M20	125	85	19.7	32	12	466501 2002	18,70
20	M20	160	110	19.7	32	12	466501 2003	19,60
20	M20	200	125	19.7	32	12	466501 2004	22,–
20	M20	250	150	19.7	32	12	466501 2006	24,90
20	M20	315	190	19.7	32	12	466501 2005	27,50
22	M20	80	55	21.7	35	14	466501 2010	17,50
22	M20	100	65	21.7	35	14	466501 2011	18,50
22	M20	125	85	21.7	35	14	466501 2012	19,–
22	M20	160	110	21.7	35	14	466501 2013	20,10
22	M20	200	125	21.7	35	14	466501 2014	22,30
22	M20	250	150	21.7	35	14	466501 2015	24,90
22	M20	315	190	21.7	35	14	466501 2016	27,90
24	M24	100	70	23.7	40	16	466501 2401	27,20
24	M24	125	85	23.7	40	16	466501 2402	28,10
24	M24	160	110	23.7	40	16	466501 2403	29,30
24	M24	200	125	23.7	40	16	466501 2404	31,40
24	M24	250	150	23.7	40	16	466501 2405	34,20
24	M24	315	190	23.7	40	16	466501 2425	42,10
24	M24	400	240	23.7	40	16	466501 2406	48,–
28	M24	100	70	27.7	44	18	466501 2410	27,30
28	M24	125	85	27.7	44	18	466501 2411	28,50
28	M24	160	110	27.7	44	18	466501 2412	30,30
28	M24	200	125	27.7	44	18	466501 2413	32,–
28	M24	250	150	27.7	44	18	466501 2414	35,60
28	M24	315	190	27.7	44	18	466501 2424	42,60
28	M24	400	240	27.7	44	18	466501 2415	48,20

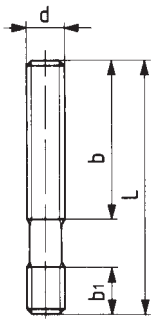
4158

AMF Studs

DIN 6379

- Rolled thread
- M6 - M12 hardened and tempered to strength class 10.9
- M14 - M42 hardened and tempered to strength class 8.8
- Further sizes available on request





d mm	L mm	b mm	b1 mm	art.no.	€
M6	32	16	9	**466505** 0632	0,70
M6	40	20	9	466505 0640	0,84
M6	50	30	9	466505 0650	0,88
M6	63	40	9	466505 0663	0,99
M6	80	50	9	466505 0680	1,04
M8	40	20	11	466505 0840	1,18
M8	63	40	11	466505 0863	1,32
M8	80	50	11	466505 0880	1,52
M8	100	63	11	466505 0810	1,60
M8	125	75	11	466505 0812	4,28
M8	160	100	11	466505 0816	4,48
M10	50	25	13	466505 1050	1,46
M10	80	50	13	466505 1080	1,80
M10	100	75	13	466505 1010	1,94
M10	125	75	13	466505 1012	2,22
M10	160	100	13	466505 1016	2,62
M10	200	122	13	466505 1020	3,02
M12	50	25	15	466505 1250	1,62
M12	63	32	15	466505 1263	1,82
M12	80	50	15	466505 1280	1,86
M12	100	63	15	466505 1210	2,02
M12	125	75	15	466505 1212	2,52
M12	160	100	15	466505 1216	2,86
M12	200	122	15	466505 1220	3,06
M14	63	32	17	466505 1463	2,10
M14	80	50	17	466505 1480	2,66
M14	100	63	17	466505 1410	2,70
M14	125	75	17	466505 1412	3,06
M14	160	100	17	466505 1416	3,28
M14	200	122	17	466505 1420	4,10
M14	250	160	17	466505 1425	5,10
M16	63	32	19	466505 1663	2,76
M16	80	50	19	466505 1680	2,86
M16	100	63	19	466505 1610	2,96
M16	125	75	19	466505 1612	3,30
M16	160	100	19	466505 1616	4,24
M16	200	122	19	466505 1620	5,20

4158

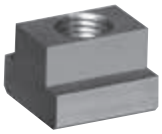
d mm	L mm	b mm	b1 mm	art.no.	€
M16	250	160	19	466505 1625	5,85
M16	315	180	19	466505 1631	7,50
M16	500	315	19	466505 1650	13,30
M18	80	50	23	466505 1880	4,80
M18	125	75	23	466505 1812	6,–
M18	160	100	23	466505 1816	6,25
M18	200	122	23	466505 1820	7,95
M18	250	150	23	466505 1825	10,20
M18	315	180	23	466505 1831	12,30
M20	80	32	27	466505 2080	4,46
M20	125	70	27	466505 2012	5,70
M20	160	100	27	466505 2016	6,90
M20	200	122	27	466505 2020	7,95
M20	250	160	27	466505 2025	9,55
M20	315	200	27	466505 2031	11,70
M20	400	250	27	466505 2040	15,40
M20	500	315	27	466505 2050	17,50
M22	100	45	31	466505 2210	9,20
M22	160	100	31	466505 2216	9,25
M22	200	122	31	466505 2220	11,20
M22	250	160	31	466505 2225	13,80
M22	315	180	31	466505 2231	17,80
M22	400	250	31	466505 2240	17,90
M24	100	45	35	466505 2410	7,60
M24	125	70	35	466505 2412	8,05
M24	160	100	35	466505 2416	8,85
M24	200	122	35	466505 2420	10,70
M24	250	160	35	466505 2425	12,70
M24	315	200	35	466505 2431	15,20
M24	400	250	35	466505 2440	18,90
M24	500	315	35	466505 2450	24,90
M24	630	315	35	466505 2463	32,80
M27	125	56	39	466505 2712	21,60
M27	200	122	39	466505 2720	21,90
M27	315	200	39	466505 2731	24,80
M27	400	250	39	466505 2740	31,40
M27	500	315	39	466505 2750	38,40

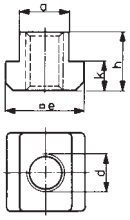
4158

T-slot nuts

- Hardened and tempered, strength class 10
- The full load capacity for T-slot nuts can only be achieved if the screw connection uses the entire thread length

Standard version, DIN 508



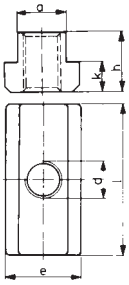


T-slot nominal dimension mm	Thread	a mm	e mm	h mm	k mm	art.no.	€
6	M5	5.7	10	8	4	**466545** 0006	2,24
8	M6	7.7	13	10	6	466545 0008	1,78
10	M8	9.7	15	12	6	466545 0010	1,88
12	M8	11.7	18	14	7	466545 1208	2,82
12	M10	11.7	18	14	7	466545 0012	1,88
14	M10	13.7	22	16	8	466545 1410	3,10
14	M12	13.7	22	16	8	466545 0014	2,24
16	M10	15.7	25	18	9	466545 1610	4,52
16	M12	15.7	25	18	9	466545 1612	3,72
16	M14	15.7	25	18	9	466545 0016	2,92
18	M12	17.7	28	20	10	466545 1812	4,80
18	M14	17.7	28	20	10	466545 1814	4,08
18	M16	17.7	28	20	10	466545 0018	3,50
20	M16	19.7	32	24	12	466545 2016	5,65
20	M18	19.7	32	24	12	466545 0020	5,30
22	M18	21.7	35	28	14	466545 2218	7,75
22	M20	21.7	35	28	14	466545 0022	5,85
24	M20	23.7	40	32	16	466545 2420	10,90
24	M22	23.7	40	32	16	466545 0024	10,30
28	M20	27.7	44	36	18	466545 2820	14,90
28	M22	27.7	44	36	18	466545 2822	18,20
28	M24	27.7	44	36	18	466545 0028	10,90
30	M24	29.7	48	38	19	466545 3024	26,70
32	M27	31.6	50	40	20	466545 0032	27,10
36	M24	35.6	54	44	22	466545 3624	24,30
36	M30	35.6	54	44	22	466545 0036	23,10
42	M30	41.6	65	52	26	466545 4230	48,60
42	M36	41.6	65	52	26	466545 0042	47,50
48	M42	47.6	75	60	30	466545 0048	92,–

4158

Long

- Protects the table slots on precision machinery

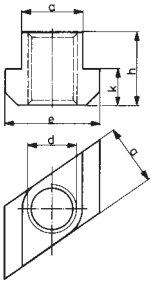


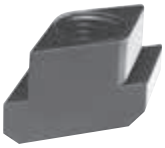
T-slot nominal dimension mm	Thread	a mm	e mm	l mm	h mm	k mm	art.no.	€
6	M5	5.7	10	20	8	4	**466547** 0006	4,08
8	M6	7.7	13	26	10	6	466547 0008	4,12
10	M8	9.7	15	30	12	6	466547 0010	4,14
12	M10	11.7	18	36	14	7	466547 0012	4,32
14	M12	13.7	22	44	16	8	466547 0014	4,80
16	M14	15.7	25	50	18	9	466547 0016	6,10
18	M16	17.7	28	56	20	10	466547 0018	7,55
20	M18	19.7	32	64	24	12	466547 0020	10,90
22	M20	21.7	35	70	28	14	466547 0022	13,30
28	M24	27.7	44	88	36	18	466547 0028	24,80

4158

Rhombus T-slot nuts

- Hardened and tempered
- Lower load capacity than comparable DIN 508 sizes due to reduced contact surface in the T-slot



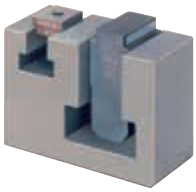


T-slot nominal dimension mm	Thread	Strength class	a mm	e mm	h mm	k mm	art.no.	€
12	M10	8	11.7	18	14	7	**466548** 0012	5,05
14	M10	8	13.7	22	16	8	466548 1410	6,15
14	M12	8	13.7	22	16	8	466548 0014	6,15
16	M14	6	15.7	25	18	9	466548 0016	6,90
18	M16	6	17.7	28	20	10	466548 0018	7,10
20	M16	8	19.7	32	24	12	466548 2016	8,95
20	M18	6	19.7	32	24	12	466548 0020	9,45
22	M20	6	21.7	35	28	14	466548 0022	11,10
28	M20	8	27.7	44	36	18	466548 2820	18,60
28	M24	6	27.7	44	36	18	466548 0028	18,60
36	M30	6	35.6	54	44	22	466548 0036	35,90
42	M36	6	41.6	65	52	26	466548 4236	71,–

4158

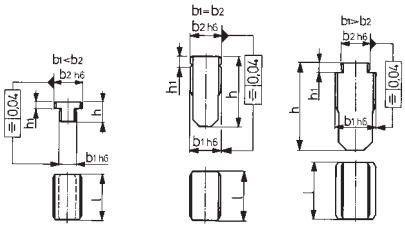
Precision slot nuts

- For quickly aligning fixtu es, machine vices and dividers
- Precisely ground to a high level of tolerance all round
- C15 case-hardened and ground



Loose slot nuts, DIN 6323

- For calibration
- No slot nuts protruding from below when the fixtu e is moved

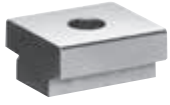


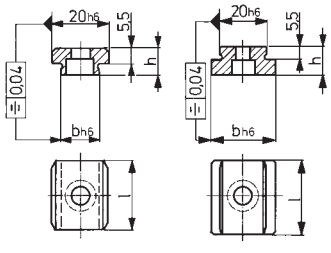
Groove dimensions machine mm	Groove dimensions device mm	h mm	h1 mm	l mm	art.no.	€
10	12	12	3.6	20	**466550** 1012	21,20
12	12	28.6	5.5	20	466550 1212	17,90
12	20	14	5.5	32	466550 1220	30,90
14	20	14	5.5	32	466550 1420	31,30
16	20	14	5.5	32	466550 1620	31,30
18	20	14	5.5	32	466550 1820	31,30
20	20	45.5	7	32	466550 2020	28,20
22	20	50.5	7	40	466550 2220	44,60
24	20	55.5	7	40	466550 2420	48,80
28	20	61.5	7	40	466550 2820	53,50
36	20	76.5	7	50	466550 3620	69,50

4157

Fixed slot nuts (previously DIN 6322)

- Screw-in
- Changing slot nuts makes it possible to work on machines with diffe ent slot widths





Groove dimensions machine mm	Groove dimensions device mm	h mm	l mm	for DIN 84 or DIN 912 screws	art.no.	€
10	20	10	22	M6 x 10	**466551** 1020	25,–
12	20	10	22	M6 x 10	466551 1220	25,–
14	20	10	25	M6 x 16	466551 1420	25,–
16	20	10	25	M6 x 16	466551 1620	25,–
18	20	10	25	M6 x 16	466551 1820	25,–
22	20	12	32	M6 x 16	466551 2220	28,80
24	20	12	32	M6 x 16	466551 2420	32,50
28	20	12	32	M6 x 16	466551 2820	33,30
36	20	12	32	M6 x 16	466551 3620	35,80

4157

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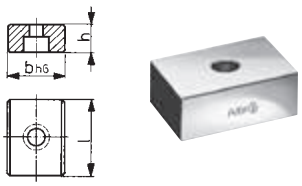
Flat slot nuts

- Screw-in
- Effecti e and economical if a fixtu e will always be used on the same machine



b mm	h mm	l mm	art.no.	€
10	8	20	**466552** 0010	7,30
12	8	20	466552 0012	7,30
14	10	22	466552 0014	7,85
16	10	22	466552 0016	7,85
18	10	22	466552 0018	8,25
20	10	22	466552 0020	8,50
22	12	32	466552 0022	11,60
24	12	32	466552 0024	11,60

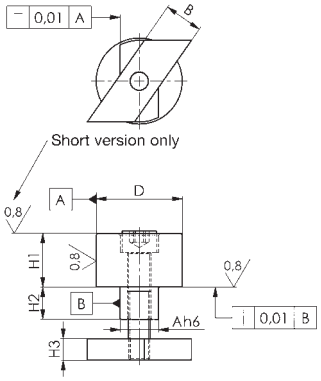
4157

Stop

- Case-hardened and ground
- Short model, ground to ± 0.01 mm height tolerance
- Can also be used as a support

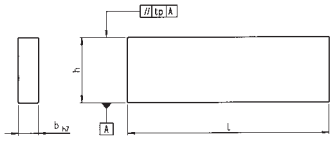
for T-slot mm	D mm	H1 mm	Screw	art.no.	€
12	20	15±0.01	M6 x 25	**465015** 1215	63,–
12	20	25±0.2	M6 x 35	465015 1220	67,50
14	32	25±0.01	M8 x 35	465015 1425	79,–
14	32	50±0.2	M8 x 60	465015 1450	83,50
16	32	25±0.01	M8 x 45	465015 1625	83,50
16	32	50±0.2	M8 x 70	465015 1650	86,50
18	40	25±0.01	M10 x 50	465015 1825	112,–
18	40	50±0.2	M10 x 75	465015 1850	117,–
20	40	25±0.01	M10 x 55	465015 2225	112,–
20	40	50±0.2	M10 x 80	465015 2250	117,–

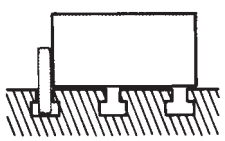
4157



Parallel stop pair

- **For machine slots**
- Case-hardened and height ground in pairs to pair tolerance IT5
- Can also be used as parallel supports
- Height pair tolerance IT5
- Nominal dimension tolerance to the extent of DIN ISO 2768m
- Nominal dimension tolerance, width: h7
- Remaining dimensions in accordance with DIN ISO 2768m
- Prices per pair





b mm	h mm	Pair tolerance tp mm	Nominal dimension tolerance DIN 7168 m (mm)	Tolerance h7 mm	l mm	art.no.	€
8	25	0.009	±0.2	-0.02	100	**465010** 0008	109,–
10	32	0.011	±0.3	-0.02	100	465010 0010	116,50
12	40	0.011	±0.3	-0.02	100	465010 0012	135,–
14	50	0.011	±0.3	-0.02	100	465010 0014	146,50
16	50	0.011	±0.3	-0.02	160	465010 0016	162,–
18	63	0.013	±0.3	-0.02	160	465010 0018	191,–
20	63	0.013	±0.3	-0.02	160	465010 0020	216,50
22	80	0.013	±0.3	-0.02	160	465010 0022	299,–
24	80	0.013	±0.3	-0.02	160	465010 0024	317,–
28	100	0.015	±0.3	-0.02	160	465010 0028	361,–

4157

Boxed clamping tool set

- Designed for machine tools with T-slot tables
- All the necessary elements for quickly clamping tools, fixtu es or workpieces
- All parts are replaceable and extensible
- Tempering steel in accordance with DIN or company standards
- Screw parts strength class 8 or 10
- Wooden box with removable hinged lid

M10 x 10 set with deep clamping jaws, slot width 10 mm

Description	art.no.	€
4 universal clamping supports Model 1 4 universal clamping supports Model 2 2 universal clamping supports Model 3 4 clamps with stepped teeth 11 x 80 2 DIN 787 T-slot screws M10 x 40 4 DIN 787 T-slot screws M10 x 63 4 DIN 787 T-slot screws M10 x 100 4 DIN 6379 studs M10 x 80 6 DIN 6330 B hexagonal nuts M10 6 DIN 6319 G conical washers M10 4 extension nuts M10 4 "Bulle" deep clamping jaws slot width 12 1 No. 3113 A combination spanner 16 x 16 1 screw paste 75 ml	**466590** 1010	485,–
	4158	

M12 x 12 set with deep clamping jaws, slot width 12 mm

Description	art.no.	€
4 universal clamping supports Model 2 4 universal clamping supports Model 3 4 clamps with stepped teeth 14 x 100 2 DIN 787 T-slot screws M12 x 50 4 DIN 787 T-slot screws M12 x 100 4 DIN 787 T-slot screws M12 x 125 4 DIN 6379 studs M12 x 100 6 DIN 6330 B hexagonal nuts M12 6 DIN 6319 G conical washers M12 4 extension nuts M12 4 "Bulle" deep clamping jaws slot width 12 1 No. 3113 A combination spanner 18 x 18 1 screw paste 75 ml	**466590** 1212	552,–
	4158	

M12 x 14 set with deep clamping jaws, slot width 14 mm

Description	art.no.	€
4 universal clamping supports Model 2 4 universal clamping supports Model 3 4 clamps with stepped teeth 14 x 100 2 DIN 787 T-slot screws M12 x 50 4 DIN 787 T-slot screws M12 x 80 4 DIN 787 T-slot screws M12 x 125 4 DIN 6379 studs M12 x 100 6 DIN 6330 B hexagonal nuts M12 6 DIN 6319 G conical washers M12 4 extension nuts M12 4 "Bulle" deep clamping jaws slot width 14 1 slot scraper for slot widths 14-20 1 No. 3113 A combination spanner 18 x 18 1 screw paste 75 ml	**466590** 1214	576,–
	4158	

M16 x 16 set with deep clamping jaws, slot width 16 mm

Description	art.no.	€
4 universal clamping supports Model 2 4 universal clamping supports Model 3 4 clamps with stepped teeth 18 x 125 2 DIN 787 T-slot screws M16 x 63 4 DIN 787 T-slot screws M16 x 100 4 DIN 787 T-slot screws M16 x 160 4 DIN 6379 studs M16 x 125 6 DIN 6330 B hexagonal nuts M16 6 DIN 6319 G conical washers M16 4 extension nuts M16 4 "Bulle" deep clamping jaws slot width 16 1 slot scraper for slot widths 14-20 1 No. 3113 A combination spanner 24 x 24 1 screw paste 75 ml	**466590** 1616	747,–
	4158	

M16 x 18 set with deep clamping jaws, slot width 18 mm

Description	art.no.	€
4 universal clamping supports Model 2 4 universal clamping supports Model 3 4 clamps with stepped teeth 18 x 125 2 DIN 787 T-slot screws M16 x 63 4 DIN 787 T-slot screws M16 x 100 4 DIN 787 T-slot screws M16 x 160 4 DIN 6379 studs M16 x 125 6 DIN 6330 B hexagonal nuts M16 6 DIN 6319 G conical washers M16 4 extension nuts M16 4 "Bulle" deep clamping jaws slot width 18 1 slot scraper for slot widths 14-20 1x No. 3113 A combination spanner 24 x 24 1 screw paste 75 ml	**466590** 1618	758,–
	4158	

M20 x 20 set with spring type clamp holder, slot width 20 mm

Description	art.no.	€
4 universal clamping supports Model 2 4 universal clamping supports Model 3 4 clamps with stepped teeth 22 x 160 4 DIN 787 T-slot screws M20 x 125 4 DIN 787 T-slot screws M20 x 200 4 DIN 6379 studs M20 x 125 6 DIN 6330 B hexagonal nuts M20 6 DIN 6319 G conical washers M20 4 extension nuts M20 1 slot scraper for slot widths 14-20 1 No. 3113 A combination spanner 30 x 30 4 DIN 6342 spring-type clamp holders Ø 38 1 screw paste 75 ml	**466590** 2020	737,–
	4158	

M20 x 22 set with spring type clamp holder, slot width 22 mm

Description	art.no.	€
4 universal clamping supports Model 2 4 universal clamping supports Model 3 4 clamps with stepped teeth 22 x 160 4 DIN 787 T-slot screws M20 x 125 4 DIN 787 T-slot screws M20 x 200 4 DIN 6379 studs M20 x 125 6 DIN 6330 B hexagonal nuts M20 6 DIN 6319 G conical washers M20 4 extension nuts M20 1 slot scraper for slot widths 22-32 1x No. 3113 A combination spanner 30 x 30 4 DIN 6342 spring-type clamp holders Ø 38 1 screw paste 75 ml	**466590** 2022	747,–
	4158	

M20 x 24 set with spring type clamp holder, slot width 24 mm

Description	art.no.	€
4 universal clamping supports Model 2 4 universal clamping supports Model 3 4 clamps with stepped teeth 22 x 160 8 DIN 787 T-slot screws M20 x 125 4 DIN 787 T-slot screws M20 x 200 8 DIN 508 T-slot nuts M20 x 24 6 DIN 6330 B hexagonal nuts M20 6 DIN 6319 G conical washers M20 4 extension nuts M20 1 slot scraper for slot widths 22-32 1 No. 3113 A combination spanner 30 x 30 4 DIN 6342 spring-type clamp holders Ø 38 1 screw paste 75 ml	**466590** 2024	750,–
	4158	

Clamping screw set

- **For T-slots**
- All parts hardened and tempered, strength classes 8 or 10
- Wooden box with hinged lid

466591 1214

M10 x 10 set, slot width 10 mm

Description	art.no.	€
2 DIN 787 T-slot screws M10 x 40 4 DIN 787 T-slot screws M10 x 80 4 DIN 787 T-slot screws M10 x 100 4 DIN 6379 studs M10 x 50 4 DIN 6379 studs M10 x 80 4 DIN 6379 studs M10 x 200 4 DIN 6330 B hexagonal nuts M10 4 extension nuts M10 4 DIN 6319 C spherical washers 4 DIN 6319 G conical washers 4 DIN 6340 washers	**466591** 1010	156,–

4158

M12 x 12 set, slot width 12 mm

Description	art.no.	€
2 DIN 787 T-slot screws M12 x 50 4 DIN 787 T-slot screws M12 x 80 4 DIN 787 T-slot screws M12 x 125 4 DIN 6379 studs M12 x 63 4 DIN 6379 studs M12 x 100 4 DIN 6379 studs M12 x 200 4 DIN 6330 B hexagonal nuts M12 4 extension nuts M12 4 DIN 6319 C spherical washers 4 DIN 6319 G conical washers 4 DIN 6340 washers	**466591** 1212	175,–

4158

M12 x 14 set, slot width 14 mm

Description	art.no.	€
2 DIN 787 T-slot screws M12 x 50 4 DIN 787 T-slot screws M12 x 80 4 DIN 6379 studs M12 x 63 4 DIN 6379 studs M12 x 100 4 DIN 6379 studs M12 x 125 4 DIN 6379 studs M12 x 200 4 DIN 508 T-slot nuts M12 x 14 4 DIN 6330 B hexagonal nuts M12 4x extension nuts M12 4 DIN 6319 C spherical washers 4 DIN 6319 G conical washers 4 DIN 6340 washers	**466591** 1214	176,–

4158

M14 x 16 set, slot width 16 mm

Description	art.no.	€
2 DIN 787 T-slot screws M14 x 63 4 DIN 787 T-slot screws M14 x 100 4 DIN 6379 studs M14 x 63 4 DIN 6379 studs M14 x 100 4 DIN 6379 studs M14 x 160 4 DIN 6379 studs M14 x 250 4 DIN 508 T-slot nuts M14 x 16 4 DIN 6330 B hexagonal nuts M14 4 extension nuts M14 4 DIN 6319 C spherical washers 4 DIN 6319 G conical washers 4 DIN 6340 washers	**466591** 1416	211,50

4158

M16 x 16 set, slot width 16 mm

Description	art.no.	€
2 DIN 787 T-slot screws M16 x 63 4 DIN 787 T-slot screws M16 x 100 2 DIN 787 T-slot screws M16 x 160 4 DIN 6379 studs M16 x 80 4 DIN 6379 studs M16 x 125 4 DIN 6379 studs M16 x 250 4 DIN 6330 B hexagonal nuts M16 4 extension nuts M16 4 DIN 6319 C spherical washers 4 DIN 6319 G conical washers 4 DIN 6340 washers	**466591** 1616	240,50

4158

M16 x 18 set, slot width 18 mm

Description	art.no.	€
2 DIN 787 T-slot screws M16 x 63 4 DIN 787 T-slot screws M16 x 100 DIN 6379 stud M16 x 80 DIN 6379 stud M16 x 125 DIN 6379 stud M16 x 160 DIN 6379 stud M16 x 250 4 DIN 508 T-slot nuts M16 x 18 4 DIN 6330 B hexagonal nuts M16 4 extension nuts M16 4 DIN 6319 C spherical washers 4 DIN 6319 G conical washers 4 DIN 6340 washers	**466591** 1618	241,–

4158

M18 x 20 set, slot width 20 mm

Description	art.no.	€
6 DIN 6379 studs M18 x 80 8 DIN 6379 studs M18 x 125 4 DIN 6379 studs M18 x 200 4 DIN 6379 studs M18 x 315 4 DIN 508 T-slot nuts M18 x 20 4 DIN 6330 B hexagonal nuts M18 4 extension nuts M18 4 DIN 6340 washers	**466591** 1820	325,–

4158

M20 x 22 set, slot width 22 mm

Description	art.no.	€
2 DIN 787 T-slot screws M20 x 80 4 DIN 787 T-slot screws M20 x 125 4 DIN 6379 studs M20 x 80 4 DIN 6379 studs M20 x 125 4 DIN 6379 studs M20 x 200 4 DIN 6379 studs M20 x 315 4 DIN 508 T-slot nuts M20 x 22 4 DIN 6330 B hexagonal nuts M20 4 extension nuts M20 4 DIN 6319 C spherical washers 4 DIN 6319 G conical washers 4 DIN 6340 washers	**466591** 2022	364,–

4158

M24 x 28 set, slot width 28 mm

Description	art.no.	€
2 DIN 787 T-slot screws M24 x 100 4 DIN 787 T-slot screws M24 x 160 4 DIN 6379 studs M24 x 100 4 DIN 6379 studs M24 x 160 4 DIN 6379 studs M24 x 250 4 DIN 6379 studs M24 x 400 4 DIN 508 T-slot nuts M24 x 28 4 DIN 6330 B hexagonal nuts M24 4 extension nuts M24 4 DIN 6319 C spherical washers 4 DIN 6319 G conical washers 4 DIN 6340 washers	**466591** 2428	593,–

4158

Basic range

- All parts are made from tempering steel, T-slot screws hardened and tempered
- Rolled thread
- Ideal for tool making, production and use in training facilities

466592 1214

M12 x 14 set, slot width 14 mm

- Clamping force 20 kN
- Clamping heights 165 mm (2 clamping positions), 70 mm (4 clamping positions)

Description	art.no.	€
2 clamps with stepped teeth 14 x 100 2 clamps with stepped teeth 14 x 160 4 universal clamping supports Model 2 4 universal clamping supports Model 3 2 DIN 787 T-slot screws M12 x 50 4 DIN 787 T-slot screws M12 x 80 4 DIN 787 T-slot screws M12 x 125 2 DIN 6379 studs M12 x 100 6 DIN 6330 B hexagonal nuts M12 2 extension nuts M12 6 DIN 6340 washers M12	**466592** 1214	271,–

4158

M14 x 16 set, slot width 16 mm

- Clamping force 28 kN
- Clamping heights 195 mm (2 clamping positions), 100 mm (4 clamping positions)

Description	art.no.	€
2 clamps with stepped teeth 14 x 100 2 clamps with stepped teeth 14 x 160 4 universal clamping supports Model 2 universal clamping suppor Model 3 2 DIN 787 T-slot screws M14 x 63 4 DIN 787 T-slot screws M14 x 100 4 DIN 787 T-slot screws M14 x 160 2 DIN 6379 studs M14 x 100 2 DIN 6379 studs M14 x 160 6 DIN 6330 B hexagonal nuts M14 2 extension nuts M14 6 DIN 6340 washers M14	**466592** 1416	309,–

4158

M16 x 18 set, slot width 18 mm

- Clamping force 40 kN
- Clamping heights 205 mm (2 clamping positions), 130 mm (4 clamping positions)

Description	art.no.	€
2 clamps with stepped teeth 18 x 125 2 clamps with stepped teeth 18 x 200 4 universal clamping support Model 2 universal clamping support Model 3 2 DIN 787 T-slot screws M16 x 63 4 DIN 787 T-slot screws M16 x 100 4 DIN 787 T-slot screws M16 x 160 4 DIN 6379 studs M16 x 160 2 DIN 6379 studs M16 x 200 6 DIN 6330 B hexagonal nuts M16 4 extension nuts M16 6 DIN 6340 washers M16	**466592** 1618	359,–

4158

Screw paste

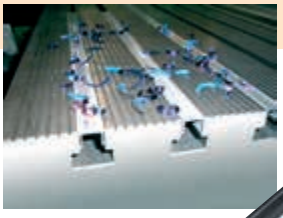
- Mineral grease-based
- Synergistic combination of highly effecti e white solid lubricants
- Heat-resistant and non-washable
  (Water resistance tested in accordance with DIN 51807, P.2; grease loss after 1 hr. at 37.8 °C = 1.4%)
- Particularly when aggressive cooling lubricants are used

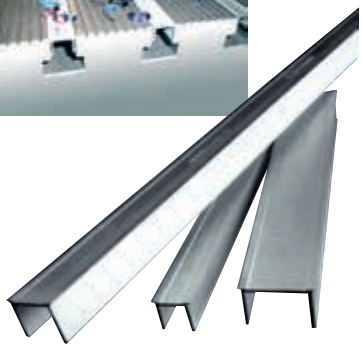
Contents	Usable temperature range °C	art.no.	€
75 ml	-25 to +125	**466593** 0075	9,20

4158

T-slot cover strip

- Made from aluminium profil
- Can easily be shortened to the desired length with a fine s wblade





suitable for T-slots mm	Dimensions	art.no.	€
12	12 x 1000	**466549** 0120	24,10
14	14 x 1000	466549 0140	25,70
16	16 x 1000	466549 0160	27,50
18	18 x 1000	466549 0180	28,60
20	20 x 1000	466549 0200	30,60
22	22 x 1000	466549 0220	31,70
24	24 x 1000	466549 0240	34,80
28	28 x 1000	466549 0280	38,–
36	36 x 1000	466549 0360	44,60

4157

Slot scraper

suitable for T-slots mm	art.no.	€
14 - 20	**466548** 1420	4,12
22 - 32	466548 2232	8,05

4157

Clamping elements for welding tables

- For welding table with Ø 16 mm and Ø 28 mm
- Individual clamping with precise positioning
- Profiles made f om tempering steel
- High-quality 2-component plastic handles
- Lever handles with latching mechanism for dosed and rapid clamping

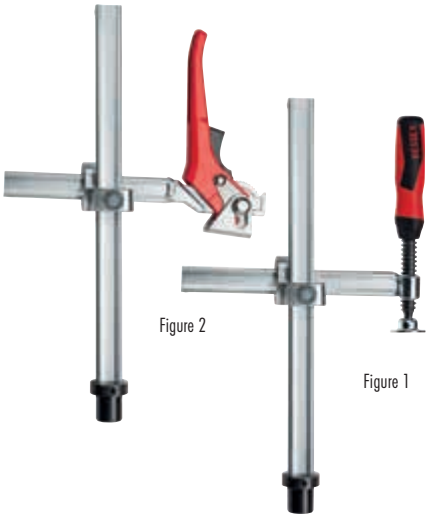


Figure 2

Figure 1

Clamping elements TWV

- For welding tables with variable projection
- Infinite y variable projection

Illustration	for bore hole Ø mm	Clamp height mm	Projection mm	Rail mm	art.no.	€
1	16	max. 200	30 - 150	22 x 8.5	**467100** 1630	59,60
2	16	max. 200	60 - 150	22 x 8.5	467100 1660	82,20
1	28	max. 300	40 - 175	28 x 11	467100 2840	69,90
2	28	max. 300	110 - 175	28 x 11	467100 2811	95,90

4192

Figure 2

Figure 1

Clamping elements TW

- For welding tables
- Static projection

Illustration	for bore hole Ø mm	Clamp height mm	Projection mm	Rail mm	art.no.	€
1	16	max. 200	100	22 x 8.5	**467110** 1610	36,40
1	28	max. 300	120	28 x 11	467110 2812	42,70
1	28	max. 300	140	28 x 11	467110 2814	47,30
2	16	max. 200	100	22 x 8.5	467110 1611	65,–
2	28	max. 300	120	28 x 11	467110 2813	76,50
2	28	max. 300	140	28 x 11	467110 2815	81,10

4192

Vario table clamping attachment TWVAD

- Infinite y variable angle adjustment of 60° internal to 60° external
- Version with bolts - for quick aligning and attachment on the welding table
- Version without bolts - for variable movement on the welding table

Illustration	for bore hole Ø mm	art.no.	€
1	-	**467120** 0000	26,80
2	16	467120 1600	34,60
2	28	467120 2800	35,80

4192

Figure 2

Figure 1

Tilting adapter TW28AV

- Accessories for extension TW28X
- Infinite y variable spindle from -52° to +52°
- Lockable trapezoid nut for securely fixing he tool

for bore hole Ø mm	Clamp Ø mm	suitable for	art.no.	€
28	160	TW28X	**467140** 2800	65,–

4192

Extension TW28X

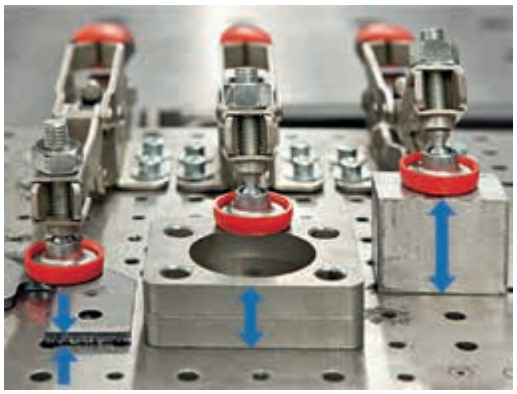
- Accessories for tilting adapter TW28AV
- Extension infinite y variable via adjusting ring

for bore hole Ø mm	Adjusting range mm	suitable for	art.no.	€
28	15 - 300	TW28X	**467130** 2800	23,70

4192

Variable toggle clamps

- **Automatic span adjustment**
  Variable clamping width horizontal clamp 0 to 65 mm,
  Push-rod clamp 0 to 25 mm
  Almost unchanged clamp force
- **Set screw in joint**
  Clamping force adjustment up to 25 kN
- **Large ergonomic handle**
  2 component plastic handle with soft inlay and large handgrip



Horizontal clamp with horizontal base plate

Clamp Ø mm	Clamp force kN	art.no.	€
0-20	1.1	**467051** 0020	23,90
0-40	2.5	467051 0040	26,10
0-60	2.5	467051 0060	26,80

4192

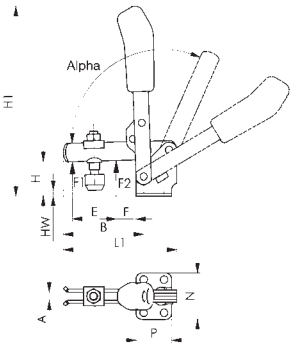
Push-rod clamp with horizontal base plate

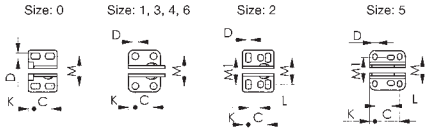
Clamp Ø mm	Clamp force kN	art.no.	€
0-10	1.1	**467054** 0010	24,50
0-16	2.5	467054 0016	27,50

4192

Vertical clamp

- Quick-action clamp with toggle mechanism
- Wide and quick clamp opening, complete workpiece exposure
- High final t ansmission with low force application, large clamping forces
- Self-locking mechanism prevents the clamp from opening due to machining forces
- **Use:** Drilling, welding, bending, grinding, testing and assembling
- Galvanised and passivated, case-hardened with greased bearing bushes
- Rivet made of stainless steel
- Complete with hardened, tempered and galvanised clamping screw
- Stainless steel version available on request

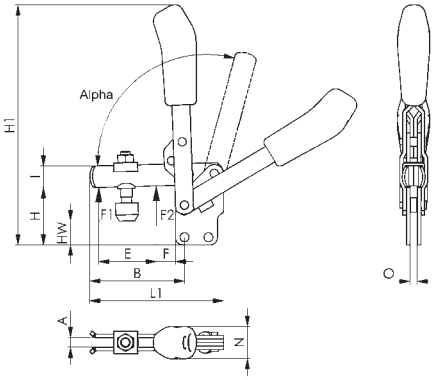


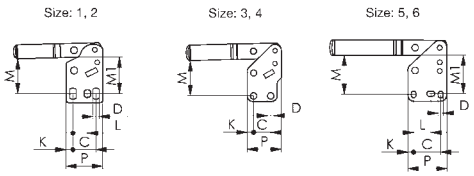


With open supporting arm and horizontal base

model	F1 kN	F2 kN	H mm	H1 mm	HW mm	A mm	B mm	L1 mm	Screw	art.no.	€
0	0.5	0.7	18	81	1.5 to 3.5	4	31	49	M4 x 25	**467001** 0000	17,80
1	0.6	1.1	19	98.5	-4 to 2	5	39	61	M5 x 30	467001 0001	19,40
2	0.8	1.2	23	139.5	-3 to 4.5	6	52	78	M6 x 35	467001 0002	24,70
3	1.2	2.5	33	186	2 to 11	8	79	112	M8 x 45	467001 0003	29,80
4	1.7	3	42.5	221	-6 to 22.5	10	101	141	M8 x 65	467001 0004	39,10
5	3	5	55.8	281	-3 to 27.5	14	140	195	M12 x 80	467001 0005	63,–
6	3.4	5.5	81	333	-2.5 to 55	14	165.5	231	M12 x110	467001 0006	82,–

4157

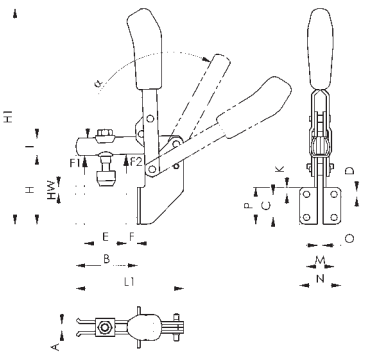




With open supporting arm and vertical base

model	F1 kN	F2 kN	H mm	H1 mm	HW mm	A mm	B mm	L1 mm	Screw	art.no.	€
1	0.6	1.1	29	109	6 to 12.5	5	39	61	M5 x 30	**467005** 0001	19,40
2	0.8	1.2	38	144.5	11.5 to 19.5	6	52	78	M6 x 35	467005 0002	24,70
3	1.2	2.5	48	200	16.5 to 25	8	79	112	M8 x 45	467005 0003	29,80
4	1.7	3	65	244	16.5 to 45.5	10	101	141	M8 x 65	467005 0004	39,10
5	3	5	77	301	18 to 49	14	140	195	M12 x 80	467005 0005	63,–
6	3.4	5.5	117	369	33 to 90.5	14	165	231	M12 x110	467005 0006	82,–

4157



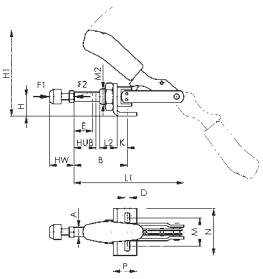
With open supporting arm and angled base

model	F1 kN	F2 kN	H mm	H1 mm	HW mm	A mm	B mm	L1 mm	Screw	art.no.	€
1	0.8	1.1	45	125	-1.5 to 5.5	5	35	61	M 5 x 30	**467010** 0001	21,70
2	1	1.2	60	167	7.5 to 15.5	6	41	77	M 6 x 35	467010 0002	27,10
3	1.4	2.5	71	223	9 to 17.5	8	63	111	M 8 x 45	467010 0003	29,80
4	2	3	102	280	11 to 40	10	84	141	M 8 x 65	467010 0004	39,10

4157

Push-rod clamp

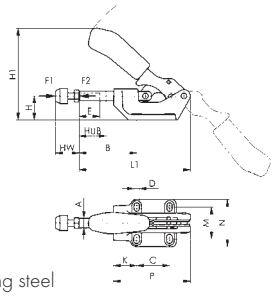
- Galvanised and passivated
- Case-hardened, with greased bearing bushes
- Stainless steel rivet
- Complete with hardened, tempered and galvanised clamping screw
- Stainless steel version available on request



With small angled base

model	F1 kN	F2 kN	H mm	H1 mm	HW mm	A mm	B mm	L1 mm	Screw	art.no.	€
0	0.8	0.8	12	49.3	12 to 20	6.5	17	66.5	M 4 x 20	**467025** 0000	32,40
1	1	1	15	60.5	12 to 20	8	24.5	91	M 4 x 20	467025 0001	33,40
2	2	2	20	85.5	17 to 25	10	32.5	114	M 6 x 25	467025 0002	36,70
3	2.5	2.5	25	108	22 to 35	12	37	140	M 8 x 35	467025 0003	41,70
5	4.5	4.5	30	129.5	30 to 50	16	41.5	171.5	M 12 x 50	467025 0005	65,–

4157



Heavy-duty version

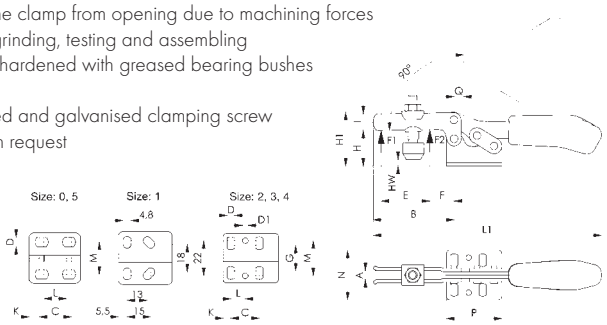
- Base body made from cast steel, lever parts and push rod made from tempering steel

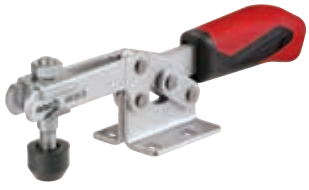
model	F1 kN	F2 kN	H mm	H1 mm	HW mm	A mm	B mm	L1 mm	Screw	art.no.	€
3	4	4	30	116	22 to 35	12	40 - 72	139	M 8 x 35	**467027** 0003	52,50
5	10	10	38	137.5	30 to 50	16	58 - 98	174	M12 x 50	467027 0005	77,50
7	25	25	55	179	30 to 50	22	59 - 105	218	M12 x 50	467027 0007	159,–

4157

Horizontal clamp

- Quick-action clamp with toggle mechanism
- Wide and quick clamp opening, complete workpiece exposure
- High final t ansmission with low force application, large clamping forces
- Self-locking mechanism prevents the clamp from opening due to machining forces
- **Use:** Drilling, welding, bending, grinding, testing and assembling
- Galvanised and passivated, case-hardened with greased bearing bushes
- Rivet made of stainless steel
- Complete with hardened, tempered and galvanised clamping screw
- Stainless steel version available on request





With open supporting arm and horizontal base

model	F1 kN	F2 kN	H mm	H1 mm	HW mm	A mm	B mm	L1 mm	Screw	art.no.	€
0	0.25	0.4	14.5	23	-5.5 to 0	4	28	79	M 4 x 25	**467015** 0000	15,30
1	0.8	1.1	19	30	-3 to 2.5	5	42	120	M 5 x 30	467015 0001	22,20
2	1	1.2	24	45	-1.5 to 5	6	64	162	M 6 x 35	467015 0002	24,10
3	1.8	2.5	32	48.5	-2 to 9	8	73	206	M 8 x 45	467015 0003	30,50
4	2	3	45	75	-4 to 24	10	113	287	M 8 x 65	467015 0004	37,70
5	3	5	46	73	1.7 to 25	10	123	321	M 8 x 65	467015 0005	60,–

4157

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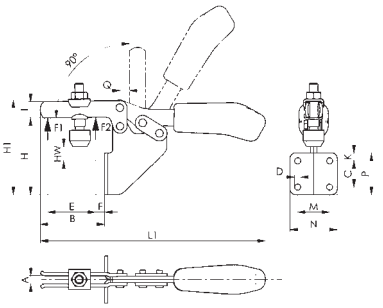
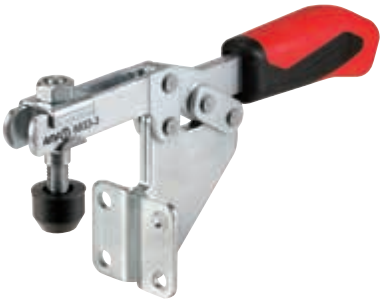




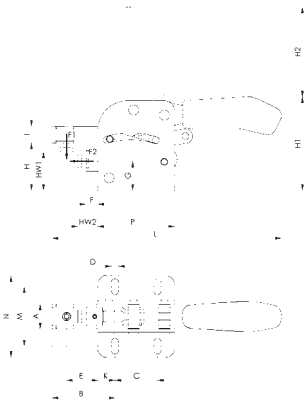
With open supporting arm and angled base

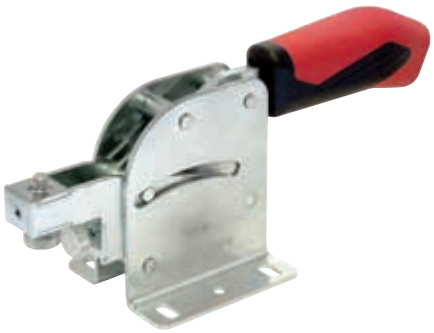
model	F1 kN	F2 kN	H mm	H1 mm	HW mm	A mm	B mm	L1 mm	Screw	art.no.	€
1	0.8	1.1	57	68	14 to 20	5	32	120	M 5 x 30	**467020** 0001	22,20
2	1	1.2	73	94	22 to 29.5	6.2	52	162	M 6 x 35	467020 0002	26,20
3	1.8	2.5	70	86.5	5 to 16	8	59	206	M 8 x 45	467020 0003	32,10
4	2	3	102	133	11 to 40	10	93	282	M 8 x 65	467020 0004	37,70

4157

AMF Combination clamp

- Positioning and clamping in a single operation
- Robust and stable construction
- Fully retracted clamping arm allows for easy workpiece removal
- Galvanised and passivated
- Case-hardened, with greased bushes
- Stainless steel rivet
- Oil-resistant handle with a large handgrip surface and soft component





model	F1 kN	F2 kN	H mm	H1 mm	HW1 mm	HW2 mm	B mm	L mm	A mm	art.no.	€
2	2.0	2.0	46.0	94	30 to 40	14 to 24	56	219	19.5	**467030** 0002	83,50
3	3.0	3.0	55.5	110	40 to 50	20 to 30	74	270	29.0	467030 0003	102,–

4157

AMF Protective caps

- **For quick-action clamps**
- Made from oil-resistant neoprene to protect delicate workpieces
- Protective cap sizes correspond to the size of the clamping screws

suitable for model	Width mm	Total height mm	Screw		art.no.	€
0	11	8.5	M 4	10	**467050** 0000	1,04
1	12.5	10	M 5	10	467050 0001	1,08
2	15	12	M 6	10	467050 0002	1,14
3+4	19	15	M 8	10	467050 0034	1,26
6	26	20	M12	10	467050 0006	1,76

4157

SARA Magnetic clamp (Orga-Magnet)

- White with red printing
- Interior raw magnet
- Price per PU = 4 pcs.

With gear-S

Ø mm	Total height mm	Retention force N	art.no.	€
36	8.5	9.5	**471021** 0035	4,95

4161

Flat pot magnets with neoprene protective sheath

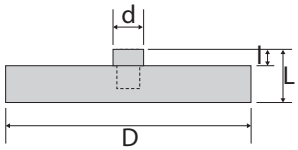
- Optimal hold on thin sheet metal
- Neoprene protective sheath for sensitive surfaces
- High lateral frictional force
- Maximum operating temperature 60°C

Flat, threaded bore

D mm	H mm	Thread	Minimum retention force N	Weight g	art.no.	€
18	6	M4	50	15	**471105** 0018	3,40
31	6	M5	75	21	471105 0031	4,90
43	6	M4	85	29	471105 0043	5,10
66	8.5	M6	180	100	471105 0066	8,60
88	8.5	M6	550	186	471105 0088	16,60

4161

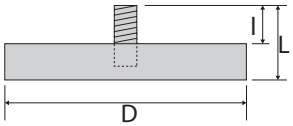
Flat, internally threaded pin



D mm	l mm	L mm	d mm	Female thread	Minimum retention force N	Weight g	art.no.	€
12	7	14.8	8	M4	10	6	**471110** 0012	2,60
18	6	11.5	8	M4	37	9	471110 0018	3,50
22	6	11.5	8	M4	58	13	471110 0022	3,90
31	6	11.5	8	M4	75	22	471110 0031	4,90
43	6	10.5	8	M4	85	30	471110 0043	5,–
66	8.2	15	10	M5	180	105	471110 0066	8,50
88	8.2	17	12	M8	420	192	471110 0088	16,60

4161

Flat, externally threaded pin



D mm	l mm	L mm	Thread	Minimum retention force N	Weight g	art.no.	€
12	7	15.5	M4	13	4.5	**470250** 0012	2,20
18	6	12	M4	37	7.6	470250 0018	3,50
31	6	17	M6	89	24	470250 0031	4,90
43	6	21	M6	85	32	470250 0043	5,40
66	8.2	23.5	M8	180	107	470250 0066	8,70
88	8.2	23.5	M8	420	193	470250 0088	16,60

4161

... from Ø 0.2 mm

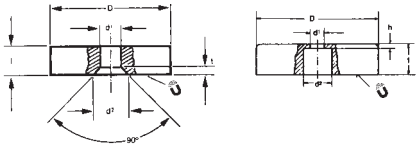
ATORN®
High quality for great performance

Flat pot magnets

- Galvanised surfaces, shielded system
- Operating temperature up to 200 °C
- **Note:** Hairline cracks on the holding surface of the built-in magnetic material are unavoidable for production reasons. These do not impair the function of the holding magnets in any way.
- Other dimensions available on request

Flat with bore

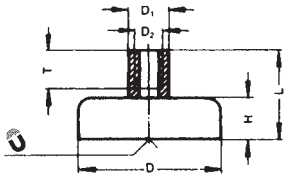
- Bore with countersink



D mm	d1 mm	d2 mm	l mm	h mm	t mm	Minimum retention force N	Weight g	art.no.	€
16	3.3	7	4.5	Countersink 90º	1.6	14	4	**471005** 0016	1,56
20	4.2	9	6	Countersink 90º	2.1	27	9	471005 0020	1,67
25	5.5	11	7	Countersink 90º	2.5	36	16	471005 0025	1,78
32	5.5	11	7	Countersink 90º	2.5	72	27	471005 0032	1,92
40	5.5	11	8	Countersink 90º	2.5	90	53	471005 0040	2,52
50	8.5	22	10	3		180	90	471005 0050	3,17
63	6.5	24	14	3		290	195	471005 0063	5,65
80	6.5	11.5	18	3		540	480	471005 0080	11,10
100	10.5	34	22	3		680	820	471005 0100	29,50

4161

Flat with internally threaded pin

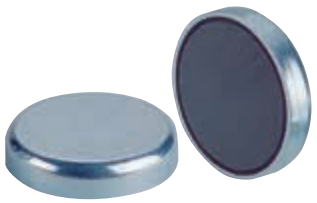


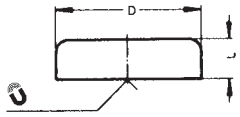
D±0.2 mm	d1 mm	d2 mm	t mm	l mm	h±0.2 mm	Minimum retention force N	Weight g	art.no.	€
10	6	M 3	7	11.5	4.5	4	3	**471010** 0010	1,46
13	6	M 3	7	11.5	4.5	10	5	471010 0013	1,56
16	6	M 3	7	11.5	4.5	18	6	471010 0016	1,71
20	6	M 3	7	13	6	30	11	471010 0020	1,85
25	8	M 4	8	15	7	40	22	471010 0025	1,96
32	8	M 4	8	15	7	80	32	471010 0032	2,13
40	10	M 5	10	18	8	125	60	471010 0040	2,84
50	12	M 6	12	22	10	220	110	471010 0050	4,01
63	15	M 8	16	30	14	350	240	471010 0063	6,75
80	20	M10	16	34	18	600	500	471010 0080	12,25
100	22	M12	21	43	22	900	960	471010 0100	30,40
125	25	M14	20	50	26	1300	1700	471010 0125	89,50

4161

Flat

- For pressing or gluing in the mounting hole



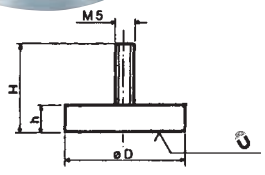


D mm	L mm	Minimum retention force N	Weight g	art.no.	€
10	4.5	4	2	**471020** 0010	1,10
13	4.5	10	3	471020 0013	1,28
16	4.5	20	5	471020 0016	1,46
20	6	30	10	471020 0020	1,56
25	7	40	19	471020 0025	1,71
32	7	80	30	471020 0032	1,85
40	8	110	55	471020 0040	2,52
50	10	200	100	471020 0050	3,13
63	14	320	230	471020 0063	5,75
80	18	600	470	471020 0080	11,10
100	22	900	915	471020 0100	29,–
125	26	1300	1680	471020 0125	86,–

4161

Flat with externally threaded pin

- Plane-ground holding surface

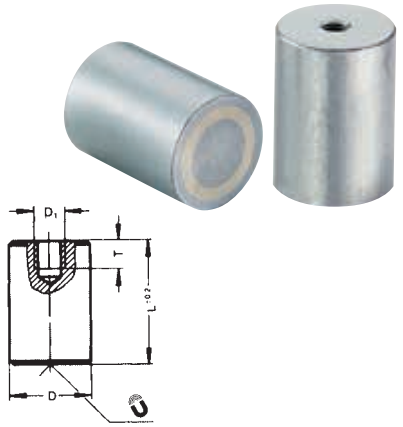


D mm	H mm	h mm	Thread	Minimum retention force N	Weight g	art.no.	€
16	11.5	4.5	M 3	18	6	**470150** 0016	1,88
20	12	6	M 3	30	11	470150 0020	2,–
25	22	7	M 5	40	23	470150 0025	2,67
47	17	9	M 6	180	90	470150 0047	5,10
57	18.5	10.5	M 6	280	142	470150 0057	8,65
63	29	14	M 6	350	235	470150 0063	10,–

4161

Pot magnets

- Smooth bar gripper, no fit tole ance
- Galvanised surface, shielded system, operating temperature up to 450 °C
- When changing the holding surface, no more than 2 mm may be removed or the holding power will decrease significant y.



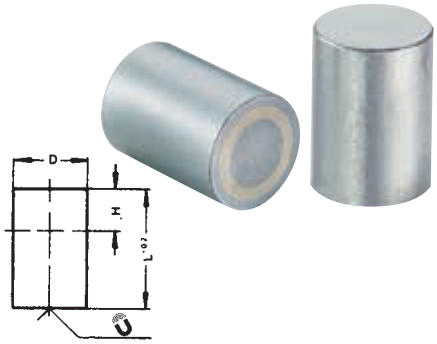
Round (bar gripper with female thread)

D±0.2 mm	L±0.2 mm	D1 mm	T mm	Minimum retention force N	Weight g	art.no.	€
6	20	M3	5	1.7	3	**471025** 0006	3,65
8	20	M3	5	4	6	471025 0008	3,87
10	20	M4	7	8.5	10	471025 0010	4,33
16	20	M4	5	20	25	471025 0016	6,40
20	25	M6	7	45	55	471025 0020	7,25
25	35	M6	9	100	135	471025 0025	11,85
32	40	M8	9	190	230	471025 0032	23,50

4161

Round (bar gripper)

- Dimension H of bar grippers can be shortened without any loss in holding power.

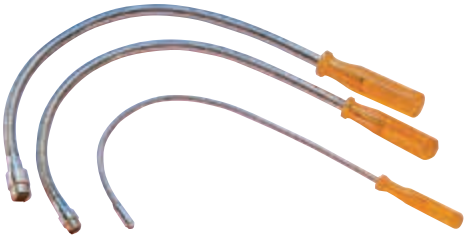


D±0.2 mm	L±0.2 mm	H mm	Minimum retention force N	Weight g	art.no.	€
6	20	12	1.7	4	**471045** 0006	3,06
8	20	11	4	7	471045 0008	3,29
10	20	10	8.5	11	471045 0010	3,63
13	20	8	12	19	471045 0013	3,98
16	20	6	20	29	471045 0016	4,85
20	25	5	45	61	471045 0020	6,30
25	35	13	100	140	471045 0025	10,75
32	40	9	190	240	471045 0032	22,30

4161

Magnetic pick-up tool

- Polished, fl xible brass tubing
- Strong holding magnet at the end



Traction N	L mm	Magnet Ø mm	Largest Ø mm	art.no.	€
5	450	6	8	**471015** 0006	11,90
10	450	10	12	471015 0010	12,90
18	520	13	15	471015 0013	18,50
30	520	17	19	471015 0017	27,80

4161

Blind hole magnets

- Magnet head consisting of a chrome-plated metal sleeve
- Inset permanent magnet

Magnet Ø mm	Head length mm	Total length mm	art.no.	€
5	40	150	**471060** 0050	29,–
8	40	175	471060 0080	31,20

4161

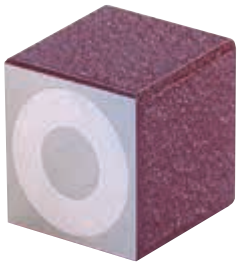
Set in a wooden box

Magnet Ø mm	art.no.	€
1.6 - 3 - 5 - 8 - 11	**471060** 1000	193,–

4161

Permanent magnet block

- Sturdy, pressure-resistant block with inset holding magnets
- For use at temperatures up to 100 °C
- Attachment method: Press-in or glue-in
- Type B with M6 thread at the rear

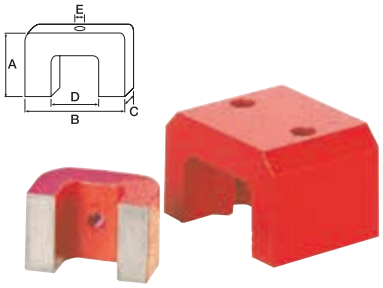


Type	Dimensions L x W x H mm	Minimum retention force N	Weight g	art.no.	€
A	26 x 26 x 25	100	110	**471055** 0001	13,65
B	60 x 26 x 25	200	250	471055 0002	19,40

4161

Strong magnet

- Bridge shape
- With strong magnetic force
- Through-hole



A mm	B mm	C mm	D mm	E mm	Minimum retention force N	Weight kg	art.no.	€
20.3	30.4	20.3	15	5	40	0.063	**471071** 0811	9,05
25.4	38.1	25.4	19.1	5	90	0.133	471071 0812	19,30
29.5	44.4	28.6	22.2	5.8	120	0.197	471071 0813	30,90
35	58	44	28	8	230	0.5	471071 0814	56,60

4161

Bar magnet

- Round or rectangular cross section
- Notches to mark corresponding poles
- Price per pair

Rectangular

Length mm	Width mm	Total height mm	Weight per pair g	art.no.	€
20	10	5	5	**471076** 0844	7,30
40	12.5	5	30	471076 0845	8,15

4161

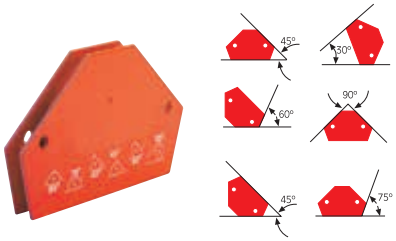
Round

Length mm	Ø mm	Weight per pair g	art.no.	€
20	6	3	**471077** 0805	2,28
24	8	7	471077 0806	3,41
30	10	18	471077 0807	5,65

4161

Multi-angle magnet

- Welding and assembly aid
- With 30°, 45°, 60°, 75°, 90° and 180° angles



Dimensions	Bore hole Ø mm	Minimum retention force N	Weight kg	art.no.	€
100 x 64 x 12	2 x 5	100	0.26	**471558** 0951	18,40

4161

Pot magnet

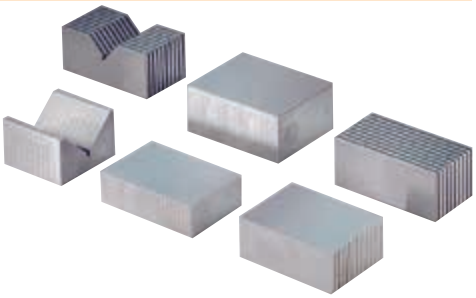
- Particularly powerful magnet, embedded in an aluminium casing
- Mounting thread on the upper side of the magnet
- Supplied with protection plate

Ø mm	Total height mm	Thread	Minimum retention force N	Weight g	art.no.	€
17	16	M6	20	16	**471003** 0831	2,99
21	19	M6	28	50	471003 0832	4,29
27	25.4	M6	68	110	471003 0833	7,90
35	30	M6	150	220	471003 0834	13,90
65	43	M12	400	1080	471003 0835	70,–

4161

Lamellar pole blocks

- Various diffe ent versions with longitudinal or transverse pole pitch
- Pole pitch: 3 mm steel, 1 mm brass
- For machining geometric and irregular workpieces
- Used with magnetic clamping plates

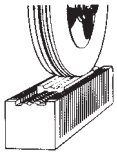


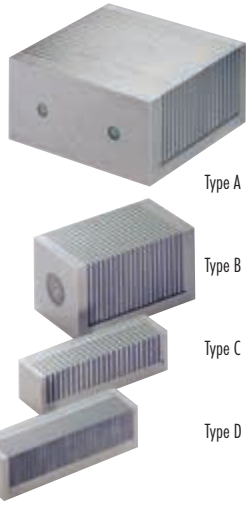
Dimensions L x W x H mm	Pole pitch	art.no.	€
100 x 70 x 48	Lengthwise	**471540** 0002	133,50
72 x 45 x 22	Transverse	471540 0004	91,50
100 x 70 x 41	Transverse	471540 0005	137,–
65 x 60 x 40 (with V-block)	Transverse	471540 0006	130,–
100 x 50 x 40 (with V-block)	Lengthwise	471540 0007	143,50
80 x 50 x 80	Transverse	471540 0010	173,50

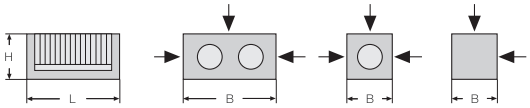
4191

Permanent magnetic clamping block

- **Not switchable**
- Clamping blocks A to C consist of a permanent magnet system with a narrow pole pitch that is effecti e on 2 to 3 surfaces (polishing: 4 mm)
- For clamping extremely thin steel workpieces = version D with a fine pole pit h of 1.3 mm
- Unlimited magnet life under normal industrial production conditions
- Clamping blocks can be ground and honed to half their height without significant y impairing the holding power







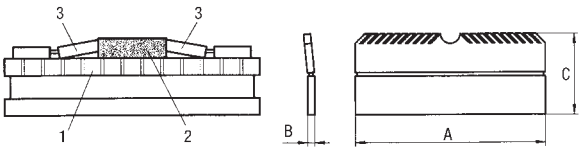
Type	L±0.15 mm	B±0.15 mm	H±0.15 mm	Max. angle deviation °	Pole pitch	Adhesive surfaces mm	Weight kg	art.no.	€
A	100	100	50	5´	4	1 surface 100x100 - 2 surfaces 100x50	3.6	**471550** 0001	415,–
B	100	50	50	5´	4	3 surfaces 100x50	1.7	471550 0002	280,–
C	100	25	25	5´	4	2 surfaces 100x25	0.5	471550 0003	179,–
D	100	25	25	5´	1.3	2 surfaces 100x25	0.5	471550 0004	330,–

4191

Clamping bars

- For clamping non-magnetic materials
- Ferro-magnetic metal
- Longitudinal side with spring-loaded bar (pull-down effect
- Price per pair

1. Magnetic plate
2. Workpiece
3. Clamping bar



A mm	B mm	C mm	art.no.	€
100	4	45	**471565** 1040	164,50
150	1	40	471565 1510	227,–
150	1.6	43	471565 1516	218,–
150	2.8	43	471565 1528	218,–
250	3.7	52	471565 2537	413,–

4191

ATORN® NEODIMIO sine table with permanent magnetic clamping plate

- For precise angle grinding and EDM work
- Can be swivelled from 0 to 45° along the longitudinal axis
- For small and large workpieces
- Base plate precision-ground and hardened to 60 HRc
- Parallelism tolerance 0.01/100 mm
- Sealed against dirt and coolant
- Supplied with 2 stop bars and a chuck key

Length mm	Width mm	Total height mm	Weight kg	art.no.	€
140	70	68	5.5	**472104** 0140	1.559,–
175	100	77	10	472104 0175	1.659,–
250	150	79	20.5	472104 0250	1.879,–
350	150	87	35	472104 0350	2.379,–
450	150	87	44	472104 0450	3.099,–

4124

ATORN® NEODIMIO permanent magnetic clamping plates

- For precise grinding and erosion work
- Particularly narrow transverse pole pitch
- Universal clamping of small, thin and large workpieces
- Nominal adhesive force 80 N/cm²
- A special switching system prevents deformation during the switching process
- Protection type IP65
- Possible wear-down of the pole plate 8 mm
- Supplied with 2 stopper bars, 2 clamping claws and hexagon key
- Further sizes available on request

Length mm	Width mm	Total height mm	Weight kg	art.no.	€
150	150	51	9	**472105** 0150	529,–
175	100	49	7	472105 0175	500,–
200	100	49	8	472105 0200	460,–
250	150	51	15	472105 0250	485,–
350	150	51	22	472105 0350	709,–
400	200	51	35	472105 0400	1.029,–

4124

Demagnetisers

Table-top demagnetiser

- Low power consumption
- Field strength increases depending on workpiece volume
- Further sizes available on request

Connection	Length mm	Width mm	Total height mm	Frequency Hz	art.no.	€
230 V	250	180	87	50	**472034** 0250	589,–

4191

Hand-held demagnetiser

- For bulky parts, effecti e surface up to 150 x 75 mm
- Lightweight plastic housing
- Further sizes available on request

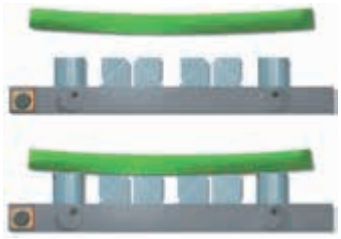
Connection	Length mm	Width mm	Frequency Hz	art.no.	€
230 V	115	80	50 - 60	**472035** 0105	609,–

4191

UniPower electrical permanent magnet clamping plate

All the advantages of QX technology are now also available in the new HE "High Efficiency" design – w h a more efficient pole design to ocus the maximum magnetic fl w towards the workpiece, regardless of position.

- Reduced height and weight of the magnetic clamping plate
- Full clamping force from 17 mm tool thickness
- Reliable quick coupling
- Maximum fl xibility of use
- Optimised contact face
- Absolute reliability
- **Supplied with control unit**



Model QX...UP

- Force/pole without air gap 615 daN
- Up to 16 kg/cm² in active magnetic fiel
- Over 75 t/m² across contact area
- Minimum workpiece thickness for maximum magnetic short circuit: 17 mm

model	Length mm	Width mm	Total height mm	Number of terminals	Retention force N	Weight kg	art.no.	€
QX 406 UP	600	400	51	24	15000	90	**473350** 0406	3.729,–
QX 408 UP	790	400	51	32	20000	115	473350 0408	4.499,–
QX 508 UP	790	480	51	40	25000	150	473350 0508	5.489,–

4175

Pole extensions

model	Ø mm	Length mm	Width mm	Total height mm	art.no.	€
PFR 60 fi ed	60			41	**473051** 6041	9,90
PMQ 60 movable		60	60	41	473051 6042	28,60

4175

473051 6041

473051 6042

MillTecBasic electrical permanent magnet clamping plate

- Patented monolith construction
- 100 % solid steel surface
- Full clamping force from 17 mm tool thickness
- Reduced height and weight of the magnetic clamping plates
- **Supplied with control unit**

MillTec grip available on request

MillTec Basic

- Force/pole without air gap 615 daN
- Up to 16 kg/cm² in active magnetic fiel
- Over 75 t/m² across contact area
- Minimum workpiece thickness for maximum magnetic short circuit: 17 mm

model	Length mm	Width mm	Total height mm	Number of terminals	Retention force N	Weight kg	art.no.	€
MTB 406	600	405	51	24	15000	75	**473450** 0406	3.989,–
MTB 408	800	405	51	32	20000	95	473450 0408	4.769,–
MTB 508	900	485	51	40	25000	115	473450 0508	5.769,–

4175

Pole extensions

model	Ø mm	Total height mm	art.no.	€
PFR 70/20 fi ed	70	20	**473071** 7020	13,–
PFR 70/45 fi ed	70	45	473071 7045	15,–
RMP 70/45 movable	76	45	473071 7645	50,–

4175

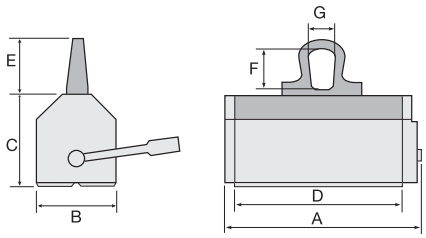
473071 7020

473071 7045

473071 7645

TECNOMAGNETE Permanent lifting magnet MaxX

- Extremely compact lifting magnets
- Lightweight and powerful
- Can lift 20 to 50 times its own weight
- The „neutral crown" prevents magnetic flux di persion, guaranteeing optimum performance even with a large air gap
- Switchable via hand lever, **with safety lock**
- Loads are handled carefully and not damaged



model	Length mm	Width mm	Total height mm	Lifting capacity kg	Weight kg	art.no.	€
MaxX 125	121	79	145	125	3.7	**472520** 0125	369,–
MaxX 250	181	79	145	250	5	472520 0250	469,–
MaxX 500	242	106	190	500	15	472520 0500	699,–
MaxX 1000	339	133	230	1000	35	472520 1000	1.209,–
MaxX 1500	416	166	295	1500	70	472520 1500	1.579,–
MaxX 2000	441	186	315	2000	95	472520 2000	2.129,–

4164

SAV just experts Permanent lifting magnet

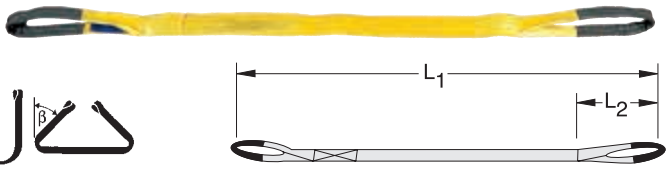
- Two-pole design
- Neodymium high-energy magnets for enormous lifting capacity
- High load-bearing capacity even with an air gap
- Suitable for round and flat mate ials
- Smooth on/off swit h **with safety lock**
- Extremely compact, lightweight
- Robust and low maintenance
- For lifting panels, profiles, plates, ound material and bar stock, e.g. for loading and unloading machines
- Supplied with individual test certificat

model	Length mm	Width mm	Total height mm	Lifting capacity kg	Weight kg	art.no.	€
NEO 150	93	60	110	150	3	**472530** 0125	399,–
NEO 300	152	100	164	300	10	472530 0250	589,–
NEO 600	246	120	164	600	19	472530 0500	879,–
NEO 1000	306	146	216	1000	36	472530 1000	1.469,–

4164

Lifting belt

- **Compliant with EN 1492-1**
- Made from polyester, double layer stitched design
- With two reinforced end loops (loop width approx. 0.5 x belt width)
- Further sizes available on request

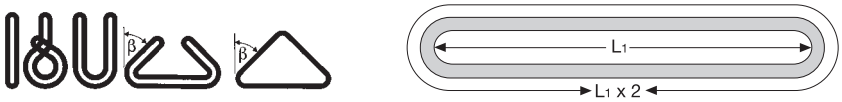


L1 mm	Width mm	L2 mm	Colour	Load bearing capacity direct kg	Load bearing capacity corded kg	Load bearing capacity single sling up to 7° kg	Load bearing capacity single sling 7°-45° kg	Load bearing capacity single sling 45°-60° kg	art.no.	€
1000	30	300	Violet	1000	800	2000	1400	1000	**477001** 1010	11,15
2000	30	300	Violet	1000	800	2000	1400	1000	477001 1020	15,30
2000	60	350	Green	2000	1600	4000	2800	2000	477001 2020	22,90
2000	90	400	Yellow	3000	2400	6000	4200	3000	477001 3020	36,40
3000	90	400	Yellow	3000	2400	6000	4200	3000	477001 3030	47,30
3000	120	500	Grey	4000	3200	8000	5600	4000	477001 4030	68,50
4000	150	550	Red	5000	4000	10000	7000	5000	477001 5040	105,–

4138

Round sling

- **Compliant with EN 1492-2**
- Made from polyester, double shell
- With woven tonnage stripes
- Further sizes available on request



L1 mm	Width mm	Colour	Load bearing capacity direct kg	Load bearing capacity corded kg	Load bearing capacity single sling up to 7° kg	Load bearing capacity single sling 7°-45° kg	Load bearing capacity single sling 45°-60° kg	art.no.	€
1000	52	Violet	1000	800	2000	700	500	**477005** 1010	5,60
2000	52	Violet	1000	800	2000	700	500	477005 1020	10,35
4000	52	Violet	1000	800	2000	700	500	477005 1040	21,20
1000	57	Green	2000	1600	4000	1400	1000	477005 2010	7,30
2000	57	Green	2000	1600	4000	1400	1000	477005 2020	14,35
4000	57	Green	2000	1600	4000	1400	1000	477005 2040	28,80
1000	71	Yellow	3000	2400	6000	2100	1500	477005 3010	10,15
2000	71	Yellow	3000	2400	6000	2100	1500	477005 3020	19,50
3000	71	Yellow	3000	2400	6000	2100	1500	477005 3030	29,30
6000	71	Yellow	3000	2400	6000	2100	1500	477005 3060	65,–

4138

Clamp-lock lashing belt

- **Compliant with EN 12195-2**
- Made from polyester, one-piece

model	Traction daN	Length mm	Width mm	Colour	art.no.	€
125	125	6000	25	Yellow	**477010** 0260	7,25

4138

Ratchet lashing belt

- **Compliant with EN 12195-2**
- Made from polyester, two-piece design, with two pointed hooks
- Further sizes available on request

model	Traction daN	Length mm	Width mm	Colour	art.no.	€
25-250	250	6000	25	Yellow	**477008** 0260	11,–
25-500	500	6000	25	Yellow	477008 0560	16,80
35-1000	1000	6000	35	Yellow	477008 1060	21,50
50-2000	2000	8000	50	Orange	477008 2080	25,–

4138

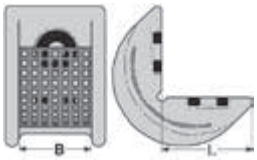
Edge protection bracket

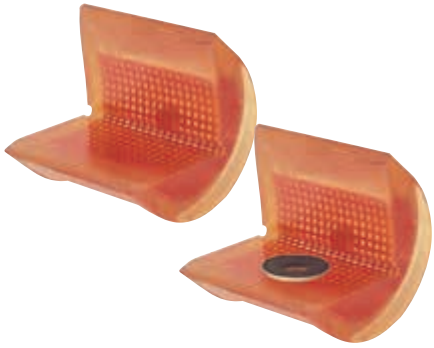
- Made from cut-resistant polyurethane
- With slots for easy fitting and atta hment to a round sling
- WLL = max. load that can be lifted by the gear with a direct in-line pull

model	Ø mm	Length mm	WLL kg	art.no.	€
30	30	80	3000	**478001** 0030	20,90
50	50	125	5000	478001 0050	67,50
				4138	

Edge protector

- Easy to handle
- For protecting textile hoisting gear against workpiece edges
- Other versions, e.g. articulated design, available on request





B mm	L mm	Weight kg	Standard art.no.	€	With magnetic fastening art.no.	€
65	100	1	**478003** 0065	85,50	**478004** 0065	114,–
100	100	1.2	478003 0100	100,–	478004 0100	128,–
125	100	1.5	478003 0125	114,–	478004 0125	142,–
200	100	2	478003 0200	142,–	478004 0200	200,–
300	100	3	478003 0300	200,–	478004 0300	285,–
			4138		4138	

Sling rope

- Regular inspection by the relevant professional association
- Rated wire strength 1,770 N/mm^{22}
- Galvanised with fib e core
- Versions with higher load capacities and longer usable lengths available on request

Rope Ø mm	Working length mm	Load bearing capacity kg	art.no.	€
8	1000	700	**478010** 1080	15,10
10	1000	1000	478010 1100	19,40
11	1000	1250	478010 1110	22,60
12	1000	1500	478010 1120	23,90
13	1000	1750	478010 1130	27,30
14	1000	2000	478010 1140	31,–
16	1000	2700	478010 1160	38,10
18	1000	3150	478010 1180	45,80
20	1000	4000	478010 1200	63,–
			4138	

Rope Ø mm	Working length mm	Load bearing capacity kg	art.no.	€
8	2000	700	478010 2080	18,70
10	2000	1000	478010 2100	23,60
11	2000	1250	478010 2110	26,50
12	2000	1500	478010 2120	29,–
13	2000	1750	478010 2130	33,–
14	2000	2000	478010 2140	37,90
16	2000	2700	478010 2160	46,70
18	2000	3150	478010 2180	55,–
20	2000	4000	478010 2200	74,–
			4138	

Joker hook

- Easy to handle
- For all commercially available round slings and lifting straps
- Forged in special 8-Plus quality
- Higher forged lobes to protect the textile lifting straps
- WLL = max. load that can be lifted by the gear with a direct in-line pull

WLL kg	A mm	B1 mm	B2 mm	F mm	G mm	H mm	L mm	Weight kg	art.no.	€
1000	89	29	31	31	14	19	113	0.66	**478020** 1000	75,50
2000	105	36	40	36	21	24	132	1.06	478020 2000	85,–
3000	125	38	47	47	23	29	145	1.61	478020 3000	95,50
6000	130	44	60	56	33	37	180	3.83	478020 6000	220,–
									4138	

Hook-end chain slings

- Complete with safety load hook, quality grade 8
- In accordance with DIN 818-4

Single-strand

Nominal chain Ø mm	Working length mm	Working load kg	art.no.	€
6	1000	1120	**478030** 1060	55,–
7	1000	1500	478030 1070	57,–
8	1000	2000	478030 1080	64,–
10	1000	3150	478030 1100	79,50
13	1000	5300	478030 1130	134,–
16	1000	8000	478030 1160	210,–
6	2000	1120	478030 2060	63,–
7	2000	1500	478030 2070	70,50
8	2000	2000	478030 2080	76,50
10	2000	3150	478030 2100	99,50
13	2000	5300	478030 2130	149,–
16	2000	8000	478030 2160	255,–

4138

Two-strand

Nominal chain Ø mm	Working length mm	Working load 0-45° kg	Working load 45-60° kg	art.no.	€
6	1000	1600	1120	**478031** 1060	92,50
7	1000	2120	1500	478031 1070	106,–
8	1000	2800	2000	478031 1080	112,–
10	1000	4250	3150	478031 1100	149,–
13	1000	7500	5300	478031 1130	250,–
16	1000	11200	8000	478031 1160	410,–
6	2000	1600	1120	478031 2060	110,–
7	2000	2120	1500	478031 2070	132,–
8	2000	2800	2000	478031 2080	133,–
10	2000	4250	3150	478031 2100	188,–
13	2000	7500	5300	478031 2130	285,–
16	2000	11200	8000	478031 2160	495,–

4138

Four-strand

Nominal chain Ø mm	Working length mm	Working load 0-45° kg	Working load 45-60° kg	art.no.	€
6	1000	2360	1700	**478033** 1060	191,–
7	1000	3150	2240	478033 1070	215,–
8	1000	4250	3000	478033 1080	235,–
10	1000	6700	4750	478033 1100	310,–
13	1000	11200	8000	478033 1130	539,–
16	1000	17000	11800	478033 1160	849,–
6	2000	2360	1700	478033 2060	225,–
7	2000	3150	2240	478033 2070	265,–
8	2000	4250	3000	478033 2080	280,–
10	2000	6700	4750	478033 2100	380,–
13	2000	11200	8000	478033 2130	579,–
16	2000	17000	11800	478033 2160	1.039,–

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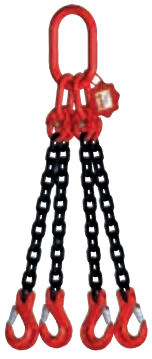

Shackle

- High-strength design with threaded bolts
- WLL = max. load that can be lifted by the gear with a direct in-line pull

Straight type

WLL kg	A mm	B mm	C mm	D mm	Weight kg	art.no.	€
330	9.5	5	19	6	0.02	**478040** 0033	0,81
500	12	7	25	8	0.06	478040 0050	0,91
750	13.5	9	27	10	0.11	478040 0075	1,03
1000	17	10	31	11	0.15	478040 0100	1,60
1500	18.5	11	37	12	0.21	478040 0150	1,75
2000	22	13.5	43	16	0.37	478040 0200	2,34
3250	27	16	51	19	0.65	478040 0325	3,66
4750	31	19	59	22	1.06	478040 0475	6,05
6500	36	22	73	25	1.56	478040 0650	9,10
8500	43	25	85	28	2.23	478040 0850	13,45
9500	47	28	90	32	3.28	478040 0950	18,50
12000	51	32	94	35	4.51	478040 1200	25,80
13500	57	35	115	38	5.93	478040 1350	36,–

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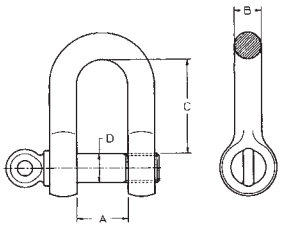

Curved type

WLL kg	A mm	B mm	C mm	D mm	Weight kg	art.no.	€
330	9.5	5	22	6	0.04	**478041** 0033	0,86
500	12	7	29	8	0.07	478041 0050	0,93
750	13.5	9	32	10	0.13	478041 0075	1,10
1000	17	10	37	11	0.17	478041 0100	1,53
1500	18.5	11	43	12	0.25	478041 0150	1,72
2000	22	13.5	51	16	0.44	478041 0200	2,37
3250	27	16	64	19	0.79	478041 0325	3,85
4750	31	19	76	22	1.26	478041 0475	6,65
6500	36	22	83	25	1.88	478041 0650	10,20
8500	43	25	95	28	2.78	478041 0850	13,35
9500	47	28	108	32	3.87	478041 0950	19,40
12000	51	32	115	35	5.26	478041 1200	28,40
13500	57	35	133	38	6.94	478041 1350	36,60

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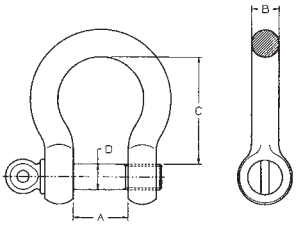


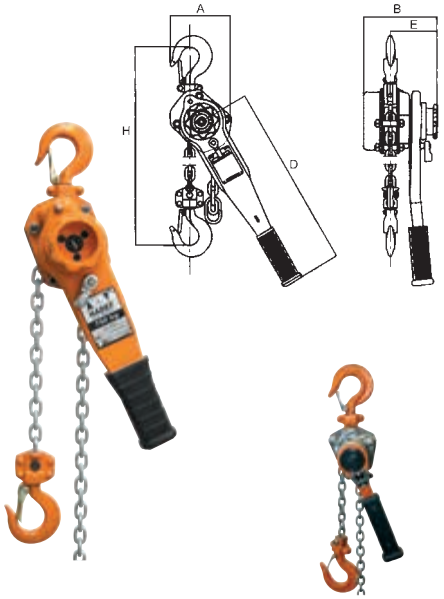
HADEF® Lever hoists

- **Highly versatile; for lifting, pulling and clamping**
- Minimal net weight
- Free-wheeling mechanism for quickly feeding out the chain when unloaded
- Self-acting, fully enclosed load brake
- High-quality precision gearing
- 1.5 m lifting height, can be extended by the metre on request

Standard lever hoists

Load bearing capacity kg	Chain strands	Load chain thickness mm	Leverage force approx. daN	Weight kg	A mm	B mm	D mm	E mm	H mm	art.no.	€
750	1	5.6	29	6.2	122	140	266	88	280	**472557** 0750	205,–
1500	1	7.1	29	9.6	142	167	414	107	350	472557 1500	255,–
3000	1	10	35	15.5	185	188	414	113	420	472557 3000	400,–
6000	2	10	36	27	139	188	414	113	570	472557 6000	689,–

4168



Mini lever hoist

Load bearing capacity kg	Chain strands	Load chain thickness mm	Leverage force approx. daN	Weight kg	art.no.	€
250	1	4	25	2	**472558** 0250	129,–

4168

... and stable.

ATORN®
Performance demands quality

... maximum material removal rate

ATORN®
High quality for great performance

Slewing cranes

HADEF®

Wall-mounted slewing crane with 180° slewing range
Pillar slewing crane with 270° slewing range

- **With spur gear hoist or electric chain hoist**
- Slewing range 180°
- Designed in accordance with DIN 15018 H2/B2

We would be happy to create a quote for you